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November 2007

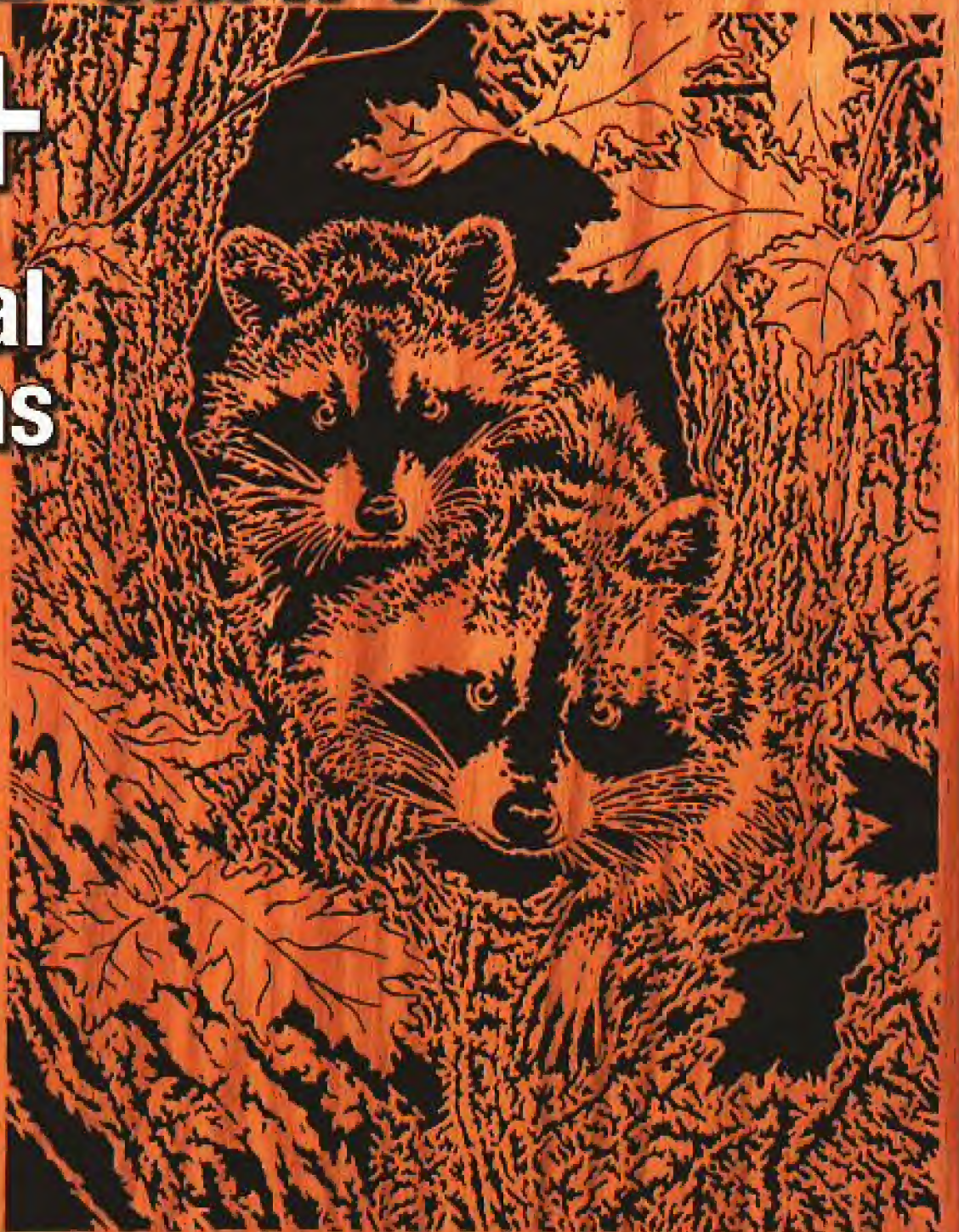
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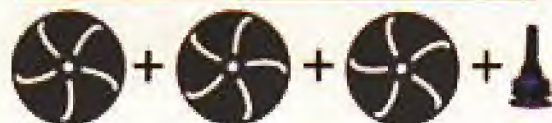
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Chimp
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The Sun and
the Moon



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Candleholder Centerpiece



Victorian Sled
Ornaments



Yellow Lab Puppy



Candy Dish



Wheat Sheaf



Seasonal Door Topper

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THE FULL SIZE PATTERNS FOR THE PROJECTS SHOWN ON THIS PAGE ARE
LOCATED IN PULL OUT PATTERN SECTION NO. 1 FOUND IN THIS ISSUE.

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Wilderness Canyon



Double Trouble



Pendulum Clock



The Clan



Deck the Halls



Harvest Leaves Door Pull



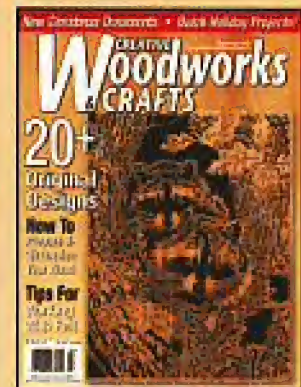
Potted Poinsettia



Moonlight Wolf



Cheetah on the Chase



On the cover: This November issue's cover features Double Trouble by Jeff Zaffino.



Potted Poinsettia

pattern by Jacob Fowler, cut and finished by Wayne Fowler



SUPPLIES

Wood: red hardwood, such as cherry, padouk, or red elm—one piece 1/4" to 1/2" x 8-1/4" x 7-1/2"
Tools: scroll saw with No. 2R and/or 5R blades; drill with assorted bits; fixed disc or belt sander with fine or extra-fine (120/220) disc or belt
Temporary-bond spray adhesive
1/4 sheet of 220-grit sandpaper
Clear packing tape
Finishing oil of choice, such as tung, walnut, or Danish
Fishing line or thin cord for hanger (optional)

Introduction

We are challenged every year to come up with new holiday designs for the magazine and for our craft shows. This poinsettia design by Jacob has an interesting twist to it because it is meant to be cut from red wood, such as cherry or padouk. The green parts of the plant are the cut-outs, and the red part of the plant is done in outline to take advantage of the wood color.

The finished poinsettia was cut from a piece of 1/2"-thick cherry. At that thickness, it can be either hung with fishing line or thread using two holes drilled as shown in the pattern, or displayed in a slotted oval base made of the same wood. The pieces were cut on an Excalibur EX21 saw using a No. 5R blade. I found that the thicker blade gave me better control for the outline cuts without losing detail in the middle of the piece. I also used a No. 2R blade when cutting this piece in red elm, and that blade worked well, too. I have been told that the red color of the cherry wood deepens with exposure to light, so I will be leaving this finished piece on my windowsill.

INSTRUCTIONS

Cutting

Step 1. Photocopy the pattern, saving the original for future use. I recommend applying a layer of clear packing tape to the surface of the wood, and then applying the pattern to the tape using spray adhesive. The tape seems to reduce the burn from the tight turns you will have to make while cutting, and it also makes the piece easier to handle.

Step 2. Drill all the guide holes, and make all the cuts. I recommend using a No. 5R blade to reduce chipping on the bottom of the piece while cutting.

Step 3. Remove the pattern by peeling off the packing tape. (If you did not use the packing tape, remove the pattern by applying a solvent such as paint thinner to the paper pattern. After removing the pattern, let the piece dry.)

Step 4. Use a disc or belt sander to sand the two faces of the piece and to smooth the outside of the oval

(unless you have cut the perfect oval). Use a 1/4 sheet of 220-grit sandpaper to remove any remaining burn. With oval pieces such as this, I round over the edges of the oval using coarser sandpaper first, then use 220-grit sandpaper to smooth the rounded edge, giving the piece a more finished look.

Step 5. Clean the piece using a clean paintbrush or other tool of choice. Finish by applying a thin oil, such as tung or walnut oil, to seal the inner edges. Let dry.

Display options

Step 6. I often display oval pieces in a slotted base. The base can be cut from the same type of wood used for the poinsettia, or from a complementary-color wood. It should be a minimum of 3/4" thick. Start with a simple oval shape for the base, approximately 6" long by 3" wide, and fret cut a 3"-long slot in the middle of it. The width of the slot should match the exact thickness of the wood used for the poinsettia. It is better to err on the side of caution and cut the slot too small, rather than too big, because the poinsettia should fit snugly in the slot. Test fit the poinsettia in the slot, and sand the slot a bit wider if needed. When fitted properly, the poinsettia should fit 1/4" to 1/2" into the slot and stand erect. Also, the poinsettia should not separate from the base when it is picked up. Once you are satisfied with the fit, use a router to finish the outside of the base. Apply your finishing oil of choice, and let dry.

Step 7. To display the piece on a wall or in a window, cut the piece from thinner wood, and drill two small holes at the top sides of the oval, referring to the pattern for placement. String light fishing line or thread through the holes, and knot the ends to make a hanger.

Please send questions concerning this project to: Wayne Fowler, 33 Longmeadow Cres., Markham, Ontario, Canada L3R 3J6, or email him at: fantasies@saw@rogers.com



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	3/8"	1.25	1.60	2.25	2.95	3.70	4.85
	1/2"	1.45	1.80	2.50	3.25	4.05	5.30
OAK BIRCH BUTTERNUT	1/8"	1.35	1.80	2.55	3.30	4.20	5.55
	1/4"	1.50	1.95	2.70	3.60	4.60	6.00
	3/8"	1.65	2.10	3.00	3.90	4.95	6.45
	1/2"	1.85	2.40	3.30	4.35	5.40	7.05
MAPLE WALNUT PURPLEHEART	1/8"	1.70	2.25	3.20	4.15	5.25	6.85
	1/4"	1.90	2.45	3.40	4.50	5.65	7.50
	3/8"	2.15	2.65	3.75	4.90	6.20	8.05
	1/2"	2.45	3.00	4.15	5.45	6.75	8.80
CHERRY SATINWOOD MAHOGANY	1/8"	2.05	2.70	3.85	4.95	6.30	8.30
	1/4"	2.25	2.90	4.05	5.40	7.00	9.00
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Deck the Halls

by Sue Mey



Introduction

"Deck the halls with boughs of holly...." We all sing along with this tune at Christmas time, but did you know the music to *Deck the Halls* is believed to be of Welsh origin and dates back to a tune called "Nos Galan" from the sixteenth century? In the eighteenth century, Mozart used the tune for a violin and piano duet. The first publication date of *Deck the Halls* is 1881, and although the author is unknown, it is thought the lyrics were written in America.

This holiday plaque will brighten up a bare wall and add to the joyfulness of the season. I used plywood for the horn and MDF for the overlays, which are painted green and red. Spray paints can be used for easy application and a glossy finish. I added shaker pegs so the plaque can even be used for hanging lightweight Christmas stockings!

SUPPLIES

Wood: Baltic birch plywood or wood of choice—one piece 1/4" x 10-1/2" x 7" (for horn); MDF (medium density fiberboard)—two pieces 1/8" x 11" x 3-1/4" (for lettering overlays), two pieces 1/8" x 5-1/2" x 4-1/2" (for ribbon overlay), two pieces 1/8" x 4-1/2" x 3-1/2" (for leaf overlay)

Tools: scroll saw with No. 3 reverse-tooth blades; drill press with 1/16" and 1/32" bits, and bit sized to match the diameter of your shaker peg; sanding block; small clamps

Temporary-bond spray adhesive

Masking tape

Double-sided tape

Sandpaper, assorted grits

Craft glue

Light oak wood stain

Spray paint in green and red

Stiff-bristled paintbrush

Small artist's brush

Clear spray varnish

Lint-free cloth

Shaker pegs (two)

Sawtooth hanger or hanger of choice

INSTRUCTIONS



Step 1. Cut the wood pieces to size. Photocopy the patterns, saving the originals for future use.



Step 2. Stack the MDF work pieces, using small pieces of double-sized tape to secure the stack. (Stacking two layers for the overlays allows for better control when cutting material this thin. Also, if a piece happens to break during sanding, you will have a backup piece.)

Step 3. Apply a layer of masking tape to the top of each work piece. Attach the patterns to the appropriate work pieces using temporary-band spray adhesive.



Step 4. Use the 1/16" drill bit to drill the blade entry holes for the larger openings, and use the 1/32" bit to drill holes in the smaller openings. Use sandpaper or a scraper blade held at a slight angle to remove the burrs created by drilling the holes.



Step 5. Thread the No. 3 reverse-tooth blade through the holes, and make all the inside cuts on the patterns.



Step 6. Cut the perimeters of the patterns.

continued on page 12



Step 7. Remove the patterns by peeling off the masking tape. Carefully pry apart the MDF pieces by inserting a scraper blade between them.



Step 10. In the same manner, paint the leaf overlay green.



Step 8. Remove all burrs from the fronts and backs of the MDF pieces by sanding them using 320-grit sandpaper and a sanding block, or sand them by hand. Sand the front and back of the horn work piece until it is smooth, and round over its edges. Use a stiff-bristled paintbrush and a lint-free cloth to remove all sanding dust.



Step 11. Apply light oak stain to the horn piece and the shaker pegs.



Step 9. Apply several thin coats of red spray paint to the ribbon and lettering overlays, letting each coat dry before applying the next.



Step 12. Spray a bit of green spray paint on a piece of scrap paper. Dip a small artist's brush into the wet paint,

and fill in the leaf shapes on the lettering overlays. (Clean the brush in paint thinner as soon as you have finished painting.)



Step 13. Determine where you want to place your shaker pegs, and mark the locations using a punch tool. Using a drill bit to match the diameter of your pegs, drill a hole all the way through the plaque at each location.



Step 14. Place the horn piece on a flat surface, apply wood glue in each hole, and insert the shaker pegs. Let dry. Scrape off any glue residue from the back of the work piece. Apply several coats of a clear finish of your choice to all surfaces of the horn piece, letting each coat dry before applying the next.



Step 15. Referring to the project photo, position the lettering, leaf, and ribbon overlays on the horn. When satisfied with the placement, glue the pieces in place, apply clamps, and let dry. Use a toothpick to remove any excess glue. When dry, attach a sawtooth hanger or your hanger of choice to the center back of the plaque, and display.

I live in Pretoria, South Africa, and have been scrolling for approximately 12 years. I can be contacted at: 27 82 492 3869 (cell); or emailed at: suem@storage.co.za. To see more of my work or patterns, visit my website, www.geocities.com/meydenhart.



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Wheat Sheaf

by Jesse Davis

Introduction

This cutting was a birthday gift for my next-door neighbor. She has a tin-punched pie sale with a wheat sheaf motif which inspired me to design this piece. She also collects antique plates, and I felt this piece would go very nicely with her collection.

INSTRUCTIONS

Step 1. Prepare your basswood round or wood of choice by sanding both sides using 120-grit sandpaper. Remove the sanding dust, and apply blue painter's tape to the front side. Apply temporary-bond spray adhesive to the back of the pattern, wait approximately 30 seconds for it to set up, and attach the pattern to the wood. Apply clear packing tape to the bottom of the piece to help lubricate the blades during cutting. (I apply the clear tape to the bottom of the piece rather than the top because I don't like the glare it gives off while cutting.)

Step 2. Drill all entry holes.

Step 3. Cut out the design, starting in the center and working out.

Step 4. Remove the pattern and tape. Using 220-grit sandpaper, finish sand the top and bottom surfaces, being careful not to disturb the bark or "live" edge.

Step 5. Remove all sanding dust. Apply a minimum of three coats of satin or semi-gloss spray lacquer, waiting at least 30 minutes between applications. When dry, burnish the wood, first using No. 0000 steel wool, then the paper from a brown grocery bag. This will help raise the shine.

Step 6. To display the piece on a wall, affix a sawtooth hanger to the upper back center, or cut a keyhole opening using your drill or router. The finished piece can also be displayed on a small plate stand.

For questions concerning this project, please send a SASE to: Jesse Davis, 623 East Winters St., Apt. W, Scott AFB, IL 62225; or email him at jesse@scrollsawart.com. Visit his gallery website at <http://scrollsawart.com>.



SUPPLIES

Wood: basswood round* or wood of choice—one piece 5/16" x 7" x 10"
Tools: scroll saw with No. 5R blades; drill or drill press with 1/16" bit; electric sander
Temporary-bond spray adhesive
2"-wide blue painter's tape
2"-wide clear packing tape
Sandpaper, 120-220 grit
No. 0000 steel wool
Brown paper grocery bag
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Moonlight Wolf

by Roy King, Scott Kochendorfer, and Bob Valle of White Tail Designs, Ltd.



SUPPLIES

Wood: maple or wood of choice—one piece 1/4" x 7" x 9"; Baltic birch plywood—one piece 1/8" x 7" x 9" (for backboard)

Tools: scroll saw with No. 2/0 or No. 2 reverse-tooth blades; drill with 1/16" drill bit

Temporary-bond spray adhesive

Clear packing tape

Masking tape

Sandpaper in medium and fine grits

White craft glue

Polyurethane spray in satin finish, or clear finish of choice

Flat black spray paint

Hanger

INSTRUCTIONS

Step 1. Photocopy the pattern, saving the original for future use. Trim the pattern to fit the piece of maple. Apply a light coat of temporary-bond spray adhesive to the back of the pattern, and allow the adhesive to slightly dry until it feels tacky like masking tape. Attach the pattern to the wood. Cover the pattern area with clear packing tape. (The tape lubricates the blade, which helps prevent burning.)

Step 2. Drill for all entry holes. Cut out all internal portions of the design, but do not cut the perimeter lines yet.

Step 3. Using masking tape, attach the piece of plywood to the back of the maple, aligning the outer edges. Finish cutting the perimeter of the pattern, cutting through both thicknesses of wood at the same time. This will ensure that the backboard exactly matches the plaque outline. Separate the two pieces and remove the masking tape.

Step 4. Using flat black spray paint, paint both sides and all edges of the backboard. Let dry. Apply the clear finish to the plaque, being certain to cover all the surface areas and fret-cut holes. Using white craft glue, attach the backboard to the plaque, being sure to align the edges. Set the piece on the work surface, place a weight on top of it, and let dry. Attach your hanger of choice to the back of the plaque.

For questions concerning this project, send a SASE to: White Tail Designs, LTD., 17713 South 66th Ct., Tinley Park, IL 60477, or email to: scrolled1@comcast.net.

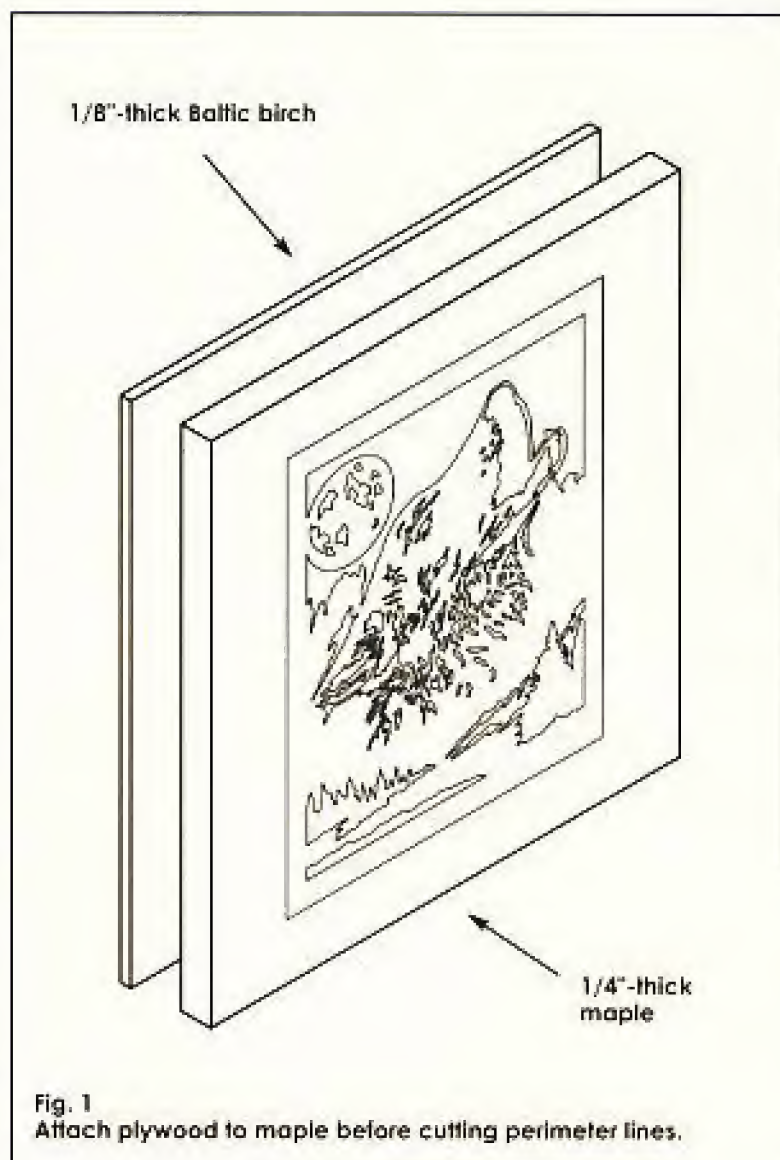
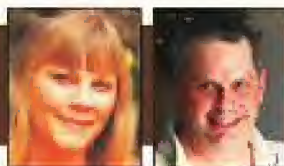


Fig. 1
Attach plywood to maple before cutting perimeter lines.



Victorian Sled Ornaments

by Sheila Bergner-Landry and Tony Landry



Introduction

These little Victorian Sled Ornaments are a great way to use up scrap pieces of hardwoods. They make nice gifts, and they are beautiful displayed on a mantle, shelf, or tree throughout the winter season.

INSTRUCTIONS

Step 1. Plane your board to the required thickness. Using the handheld orbital sander and 120-grit sandpaper, sand both sides of your wood to remove the planer marks and smooth the surface. Graduate to 220-grit sandpaper, and finally to 400-grit sandpaper, until the surface of your wood is satin smooth. This will make it much easier to finish your project after cutting. Using your vacuum with the soft brush attachment, vacuum all the dust and debris from the wood.

Step 2. Photocopy the patterns, saving the originals for future use.

continued on page 20

SUPPLIES

Wood: ash or wood of choice—one piece 1/4" x 6" wide x 26" long (enough for 9 sled tops); walnut, mahogany, or wood of choice—one piece 1/8" x 3" wide x 6" long (each 6"-long piece is enough for the runners and supports for one sled)

Tools: scroll saw with No. 2 reverse-tooth blades; drill press with 1/32" and 1/16" drill bits; handheld orbital sander with assorted grits (120-400) sandpaper; vacuum with soft brush attachment; planer (for proper wood thickness)

Temporary-band spray adhesive

Clear 2"-wide packing tape

Clear-drying wood glue

Delta interior/exterior brush-on varnish in satin finish, or varnish of choice

Metallic cord, 1/32"-diameter (6" for each sled)





Step 3. Apply a light coating of temporary-bond spray adhesive to the backs of the patterns. Allow the spray to set up for a few seconds, until it feels tacky like masking tape. Position the patterns on the appropriate pieces of wood. Place a layer of clear packing tape over the entire surface of the design to help prevent burning of hard woods.



Step 4. Using the 1/32" bit, drill the entry holes for the internal cuts of the design on the sled top pieces.



Step 5. Also drill the entry holes for the internal cuts in the runners.

Step 6. Make the inside cuts of all the pieces first, then cut the perimeters.



Step 7. Lastly, cut along the dotted lines at the top of each runner. The small pieces cut off from each runner will be the supports.

Step 8. Using the handheld orbital sander and 400-grit sandpaper, very carefully sand the pieces, being sure that all the delicate areas are fully supported from the bottom so they don't break. Carefully vacuum all pieces to remove any dust.

Step 9. Apply several coats of brush-on satin varnish to all pieces, sanding lightly between coats using 400-grit sandpaper. Be sure to apply varnish to all sides of the pieces so that they will not warp from uneven absorption of moisture in the air. Allow the finish to dry thoroughly, usually several hours or overnight.



Step 10. Using the 1/16" drill bit and referring to the pattern for placement, drill two holes in the sled tops for the cord.



Step 11. Apply clear-drying wood glue to the top edges of the runners, but don't position them on the sled top yet. Set the runner pieces aside, allowing the glue to tack up.



Step 12. Glue the two runner supports into place on the bottom of the sled top.



Step 13. Apply a small amount of glue to the top inner side of the runner pieces, where they will contact with the support pieces. Position the runner piece on the bottom of the sled top, with the inner side of the runner flush against the support piece. Glue in place.

Step 14. Let all glue dry thoroughly. When dry, string the cord through the pre-drilled holes, and knot at the ends for a hanger.

For questions, contact Sheila at 902-245-5865, or email her at: scrologirl@comcast.net. You may also see and purchase other patterns by Sheila Bergner-Landry at www.sheilalandrydesigns.com and download free brochures of her designs.





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Cheetah on the Chase

by Rick Thornberg

SUPPLIES

Wood: Baltic birch plywood—two pieces 1/4" x 11" x 14"

Tools: scroll saw with Flying Dutchman No. 1/0 spiral blades; drill press with 1/16" bit; palm sander or sanding blocks; spring clamps; air compressor; plumber's torch (optional); needle files and/or Dremel tool

Temporary-bond spray adhesive

Masking tape

Packing tape

Sandpaper, 220- and 400-grit

Clear coat finish

Mineral spirits

Tacky glue

Felt or posterboard for backing—one piece 11" x 14"

Introduction

Like many scrollers, I spend a great deal of time surfing the web looking for interesting photos and paintings that can be turned into patterns for my work. When I first chanced upon the photo of the original artwork on which this piece is based, it stopped me in my tracks. Its life-and-death scenario was full of movement, action, and energy. Could I capture that same energy in a wood cutting? The painting was only a thumbnail-size version, which is much smaller than any other I had worked with before. I like a challenge, but I knew this would pose quite the test!

My best friend, Theodore "Buzz" Buzzelli, introduced me to scrolling about 3-1/2 years ago, and I've been hooked ever since! I especially like the challenge of creating derivative patterns from artwork and photos, and Buzz and Gary Browning have been very helpful in providing advice and instructions on honing my skills in this area.

I worked on the pattern, off and on, for about a year. Finally, last January, I "got it right," and I was ready to turn my 8" x 11" pattern into a cutting worthy of the original painting. I had the pattern enlarged to fit the wood I had chosen, and forty hours and approximately 1300 cuts later, "Cheetah on the Chase" was hanging on my wall!

I'll admit this is a detailed pattern, but don't be put off by it. Patience and attention to detail is all it takes.

INSTRUCTIONS

Step 1. I use 1/4"-thick Baltic birch for all my cuttings because it provides a nice, clear surface for my finished pieces. Sand both sides of the wood, and stack the two pieces, using spring clamps to secure the stack. Apply a layer of

continued on page 24





continued from page 23

masking tape to the entire top surface, which will aid in clean-up after cutting.



Step 2. Photocopy the pattern, saving the original for future use. Apply a heavy coating of spray adhesive to the masking tape on the wood, and attach the pattern to it.



Step 3. Cover the entire pattern with a layer of clear packing tape. This helps eliminate pattern slippage by binding the pattern to the wood, and the tape helps lubricate the blades during cutting.



Step 4. Due to the intricate nature of the cutting, I used a 1/16" drill bit to drill the entry holes, and a No. 1/0 spiral blade for cutting. I started in the center and worked my way out to the edges. Pay special attention to the blade tension and speed of the saw. I set my Dewalt to a tension setting of 4 to 4-1/2, and a speed of 6.

Step 5. When finished cutting, remove the pattern by peeling off the tape, and separate the two pieces. Use an air compressor to blow the dust from all the cuts on the front and back of the wood.

Step 6. Sand both sides using 220-grit sandpaper. Wave a plumber's torch back and forth across the wood to burn off any remaining fuzzies. Keep the torch approximately 3" above the wood's surface. (Do NOT use the torch if any finish or solvent has been applied to the wood.)

Step 7. Using 400-grit sandpaper, sand both sides of the wood again. Blow any remaining dust out from the cuts using the air compressor. Finally, clean each cut again using a Dremel tool and/or needle files.

Step 8. Spray the wood with mineral spirits to help remove any excess glue, and let it dry overnight. Apply a coat of spray lacquer to the front and back. When dry, give it a light hand-sanding using 400-grit sandpaper. Wipe down the piece using a cloth soaked with mineral spirits, then apply two more coats of lacquer. Let dry for 24 hours.

Step 9. I glued black posterboard to the back of my cutting, but feel free to use your backer of choice. Use care when applying the glue so that it doesn't run into the cuts.

Step 10. Now comes the fun part—selecting a frame that will enhance the beauty of your work! Hobby and craft stores stock frames in assorted sizes and colors, or you can choose to have your cutting custom framed. Display your finished piece with pride!

For questions concerning this project, please email Ric at: rthornberg@safx.it.com.



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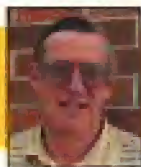
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Candy Dish

by Gary MacKay



SUPPLIES

Wood: mahogany or wood of choice—one piece $3/4"$ to $1"$ x $8"$ x $8"$, one piece $1/4"$ x $8"$ x $8"$

Tools: scroll saw with No. 7 blade; drill with $1/4"$ drill bit; awl or flat-blade screwdriver; quick grips (four); spring-type clamps (four)

Temporary-bond spray adhesive

Clear packing tape

Sandpaper, assorted grits

Wood glue

Non-toxic clear finish of choice

the pattern to the $3/4"$ -thick wood. Cover the pattern with a layer of clear packing tape. Drill two $1/4"$ -diameter holes where indicated on the pattern.



Step 2. Tilt the scroll saw table down 10° to the right. Thread a No. 7 blade through each hole, and cut out the two compartments, cutting in a counter-clockwise direction. Do not remove the pattern.

Introduction

This candy dish is an easy project to make on the scroll saw, requiring only three cuts to complete it. I surfaced rough wood to a thickness of $1"$ for the candy dish sides, but $3/4"$ -thick surfaced stock will work just as well. I needed to edge glue my stock together in order to get the $8"$ width required.

INSTRUCTIONS

Step 1. Photocopy the pattern, saving the original for future use. Using temporary-bond spray adhesive, attach



Step 3. Sand off any wood burrs from the bottom of the two compartments. Apply a thin layer of wood glue to the bottom of the piece, and position it on top of the 1/4"-thick piece of wood. Clamp the pieces together. Wait approximately ten minutes before using an awl or flat-blade screwdriver to remove any glue squeeze-out from the compartments.



Step 4. With the scroll saw table still tilted at 10°, cut along the perimeter of the pattern, cutting in a counter-clockwise direction. (Remember to return the scroll saw table to 90° when finished cutting.) Sand all surfaces. Apply a clear finish of your choice, and let dry.

For questions concerning this project, please send a SASE to: Gary MacKay, 2779 Canvasback Trail, Myrtle Beach, SC 29588.



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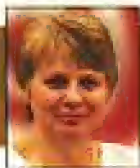
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The Clan

by Marilyn Carmin



SUPPLIES

Wood of choice—one piece 3/4" x 15" x 18" (or larger)
Tools: scroll saw with No. 5 (12.5 TPI) blade; drill with No. 58 bit
Temporary-band spray adhesive
Wood glue
Glue brush
Clear finish of choice

MEET THE CLAN

The Eagle: represents strength, courage, and wisdom; a protector

The Raven: ingenious, easygoing, and romantic; a charmer

The Bear: has an enormous heart; generous and shy, but practical and level-headed; a leader

The Wolf: fiercely independent; gentle and compassionate; intensely loyal

The Cougar: symbol of courage, valor, power, and swiftness

INSTRUCTIONS

Step 1. Attach the pattern to the wood using temporary-band spray adhesive.

Step 2. Drill for all inside cuts.

Step 3. Make all inside cuts. Do not cut the perimeter of the design yet.

Step 4. Set the saw table 3° to the right. Starting at the X marked on the pattern, cut the perimeter of the design following the directional arrow. (If your table only lifts to the left, cut in the opposite direction indicated by the arrow.)

Step 5. Remove the pattern. Sand the wood as needed.

Step 6. Use a glue brush to apply glue to the back half of the outer edge of the cut piece. Insert the cut piece back into the larger piece of wood so the front half of the cut piece protrudes. (No glue should be visible on the finished piece.)

Step 7. Apply a clear finish of your choice.

For questions concerning this project, send a SASE to: Marilyn Carmin, 4569 NE 78th Place, Portland, OR 97218.





Pendulum Clock

by Dan and Ray Wickens



Introduction

The patterns provided in the pattern section are for the large clock, which measures approximately 5-1/2" wide and 9" long. For the medium-size clock, reduce the patterns by 25% and use 3/16"-thick wood. (The medium clock measures approximately 4-1/8" wide and 6-3/4" long, and holds a 1-7/16"-diameter clock insert which requires a 1-3/8"-diameter mounting hole.) For the small clock, reduce the patterns by 50% and use 1/8"-thick wood. (The small clock measures approximately 2-3/4" wide and 4-1/2" long, and holds a 15/16"-diameter clock insert which requires a 29/32"-diameter mounting hole. Note that no pendulum drive is used with the small clock.)

SUPPLIES

Wood: 1/4"-thick wood of choice*—two pieces 4" x 4" (for front and back), two pieces 1-1/2" x 4" (for sides), one piece 3" x 5-3/4" (for floor), two pieces 1-1/2" x 3-1/2" (for supports), one piece 4-1/2" x 4-1/2" (for lower back), six pieces 1" x 4" (for upper brackets), two pieces 2" x 2-1/4" (for lower brackets), one piece 1-1/2" x 5" (for crown front), two pieces 1-1/2" x 2" (for crown sides)

Tools: scroll saw; drill press with very small drill bit for starter holes; table saw or similar saw; planer for proper wood thickness; belt sander or handheld sander; assorted clamps; X-Acto knife and/or needle pick

Temporary bond spray adhesive

Masking tape

Double-sided tape

Sandpaper, assorted grits

Wood glue

Oil finish of choice

2"-diameter mini clock insert, requiring 1-13/16"-diameter mounting hole**

Mini-pendulum drive unit, requiring 1-3/8"-diameter hole**

*Available from Sloan's Woodshop, 888-615-9663; 3453 Gail's Rd., Lebanon, TN 37090; www.sloanswoodshop.com.

**Available from Klockit, 800-556-2548; www.klockit.com, or Wildwood Designs, 800-470-9090; www.wildwooddesigns.com.

INSTRUCTIONS

Preparing the wood

Step 1. Copy the patterns, saving the originals for future use. After selecting your wood, plane it to the proper thickness. Cut wood to size of patterns. All straight-edge pieces should be cut to size on a table saw or equivalent for accurate dimensions and straight edges. Cut scroll saw edges to be oversize.

Step 2. Attach the patterns to the appropriate wood pieces using spray adhesive. (It may take some practice to determine the right amount of adhesive to use. Too much adhesive, and the pattern is difficult to remove; too little, and the pattern may come loose during sawing.) Align the straight edges of the patterns with the straight edges of the wood you have cut.

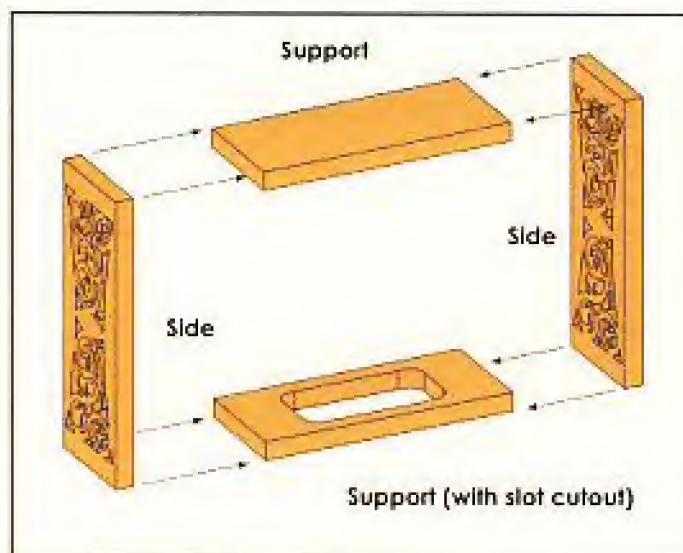
Step 3. Using a small drill bit, drill a hole in the waste area of each cutout. Feed the scroll saw blade through the small holes, and cut along the lines. Feed the blade through the next hole and so on, making all the interior cuts first. For exterior cuts, you can cut in from the edge or drill a small hole just outside the exterior line. (Note that only one of the two support pieces should have the slot cut into it.)

Step 4. Peel the patterns off the pieces. For patterns that

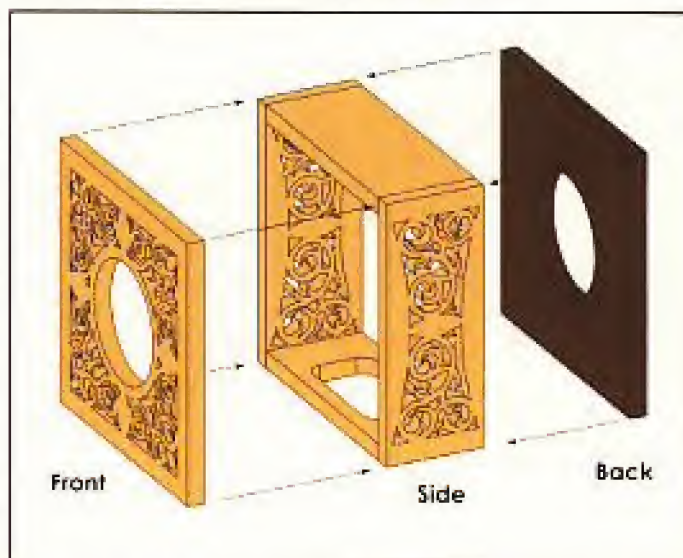
don't easily peel off, you may want to try using a hair dryer to help remove them. Be careful because some cuts are very fragile. Sand the pieces using a belt sander or handheld sander. Remove any burrs and clean up any cuts using an X-Acto knife or a needle pick.

Assembling the clock

Note: On all seams, run a small bead of glue and sand while the glue is still wet. This should fill any seams.



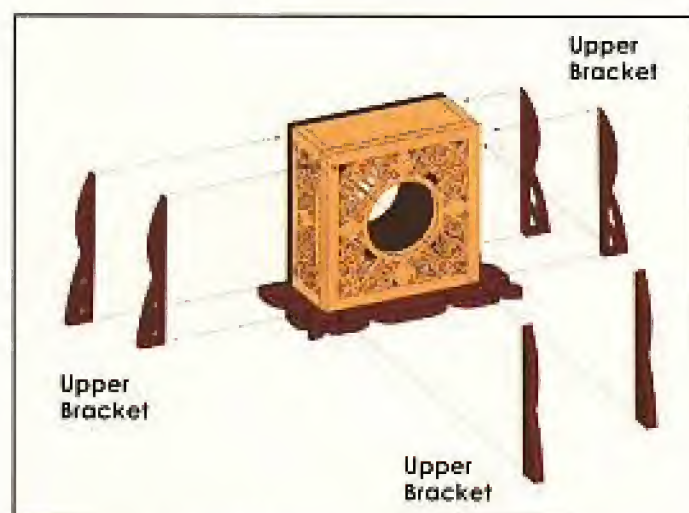
Step 5. Glue the sides to the supports. These need to be flush to each other at the top, bottom, front, and back, and square to each other. (The support piece with the slot cut into it will be at the bottom of the clock assembly in order to accommodate the pendulum unit.)



Step 6. Glue the front and back to the clock assembly. These need to be flush on the top, bottom, and sides, and square to the assembly.

continued on page 32

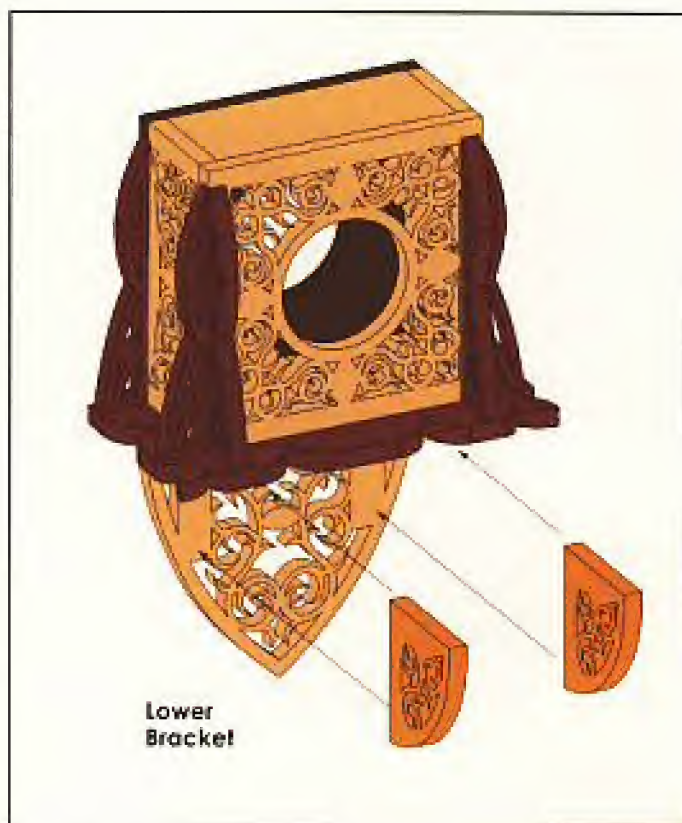
Step 7. Glue the floor to the bottom of the clock assembly. This needs to be centered side to side, and flush with the back.



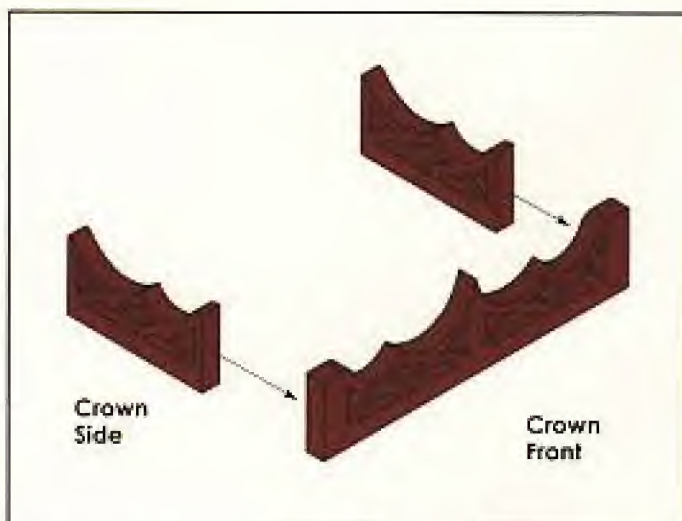
Step 8. Glue the upper brackets to the front and sides of the clock assembly. These need to be in line with the sides, front, and back, and square to the clock assembly.



Step 9. Glue the lower back to the clock assembly. This needs to be flush with the back of the clock assembly, and centered side to side with the assembly.



Step 10. Glue the lower brackets in place on the lower back. These need to be centered in the appropriate areas on the lower back piece, and square to the clock assembly.



Step 11. Glue the crown sides to the crown front. These need to be flush on the bottom and sides.

Crown Assembly

Step 12. Position the crown assembly on the clock assembly so it is centered side to side and overlaps the top edges of the clock assembly by 1/8". Glue in place.



Step 13. Let glue dry for one hour. Apply oil finish following the manufacturer's instructions, and let dry completely. Install the clock insert and pendulum drive, and sit back and enjoy your new clock!

For questions concerning this project, send a \$ASE to: Wilkens Woodworking, P.O. Box 520496, Independence, MO 64052, or email: wilkwood@aol.com.



Assembly Diagram,
Side View



Assembly Diagram,
Front View

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WORKING WITH FELT

by Wayne L. Bosler, III



I like to use felt as liners for my projects for many reasons: it looks nice; it has a nice, rich feel to it; it doesn't require any special tools to work with it; you can easily rip it out and change colors; and, what I like best about it, is that it is very inexpensive. The fabric department at my local superstore stocks several colors of felt, and I can purchase a yard (36" x 54") for \$4.00. You can finish a lot of projects with that much fabric! In this article, I'll share some tips for working with felt and how to use it to provide that extra finishing touch to your projects.



The boxes that I used for my samples are from a pattern by Dan and Roy Wilkens that was featured in the September, 2005 issue of *Creative Woodworks & Crafts*. I made matching boxes for my two daughters, with one lined in green felt, and one lined in blue.

It is almost impossible to remove bits of wood from the fabric, so be sure that all woodworking is complete and the box is assembled to ensure all pieces fit properly before you begin to line the box. When you are satisfied with the fit of the pieces, remove the bottom. This will give you better access to the interior of the box.

I prefer using single-edge razor blades because I can control them better and they can definitely take a lot of downward pressure without having the tip snap off. This is very important when cutting fabric because you want to be able to make a clean cut in one pass. Two passes will pull your fabric out of shape and ruin your piece. (Notice that I am using an old kitchen cutting board for my cutting surface. The cutting board is easy on the blade tips, and it



protects my table tops. It also allows you to rotate your workpiece without having to move the fabric or measuring tools. This permits you to achieve the most comfortable cutting position throughout the entire process.)



To begin, use scissors to cut a piece of fabric approximately 2" larger than needed. (The box bottom for this example measures 3" x 6".) Position a flat metal square (preferably one with measurements) on the fabric, and trim two sides of the fabric. Don't move the square until you have cut two sides, which gives you a clean, square edge. Rotate the metal square, and line up the measurements with the square edges. (I lined up the 3" measurement on one edge, and the 6" measurement on the other.) You now can make the remaining cuts. In the same manner, cut the fabric pieces for the box sides and top.



Next, dig out your bottle of yellow carpenter's glue and a 1" foam brush. Pour approximately 2 ounces of glue into a plastic cup, and mix with just enough water so the glue will spread easily. Be careful not to add too much water, or the glue will be runny. If you hold a piece of fabric up to the light, you will notice small voids. The glue should be able to flow into the voids, but not come through them.



Dry fit your piece of fabric to the box base. It will generally be a little too large. Place the fabric on the board and, using a fresh blade, trim as needed. (Be aware that you will get a tiny pull at the edge of the fabric where the blade exits the material, even when using a fresh blade. Simply trim back to square using the blade.) If your project has finish in the areas which need to be glued, use sandpaper or a scotchbrite to dull the finish. Apply a light coat of the glue mixture to the wood. (The photo provides an example of how thick a coat I like to apply.)

Position the fabric on the wood. I use a gentle patting action over the entire area until I feel the fabric getting slightly damp. This means the glue is now in the voids. If necessary, it is



possible to stretch the fabric just a little. The glue sets fairly quickly, and you can rotate the project in about 10 minutes, as long as you are careful.



In the same manner, line the box sides and top. (When lining the inside of the box, measure and cut opposite sides first. If you line adjoining sides, the fit will be different for each piece.)

After lining all the surfaces, let the glue dry for a few hours before completing the assembly of your project.



If your project has odd shapes or circles, scroll patterns for the pieces from a thin piece of plywood, and save them with your original patterns for future use. (Use caution when using wood or plastic as a cutting edge. The blade can catch in the edge, and ride up your fingers. Trust me, that is not good. I know from experience!)

Good luck with lining your future projects, and thanks to Dan and Ray Wilckens for providing such a great pattern for the models!

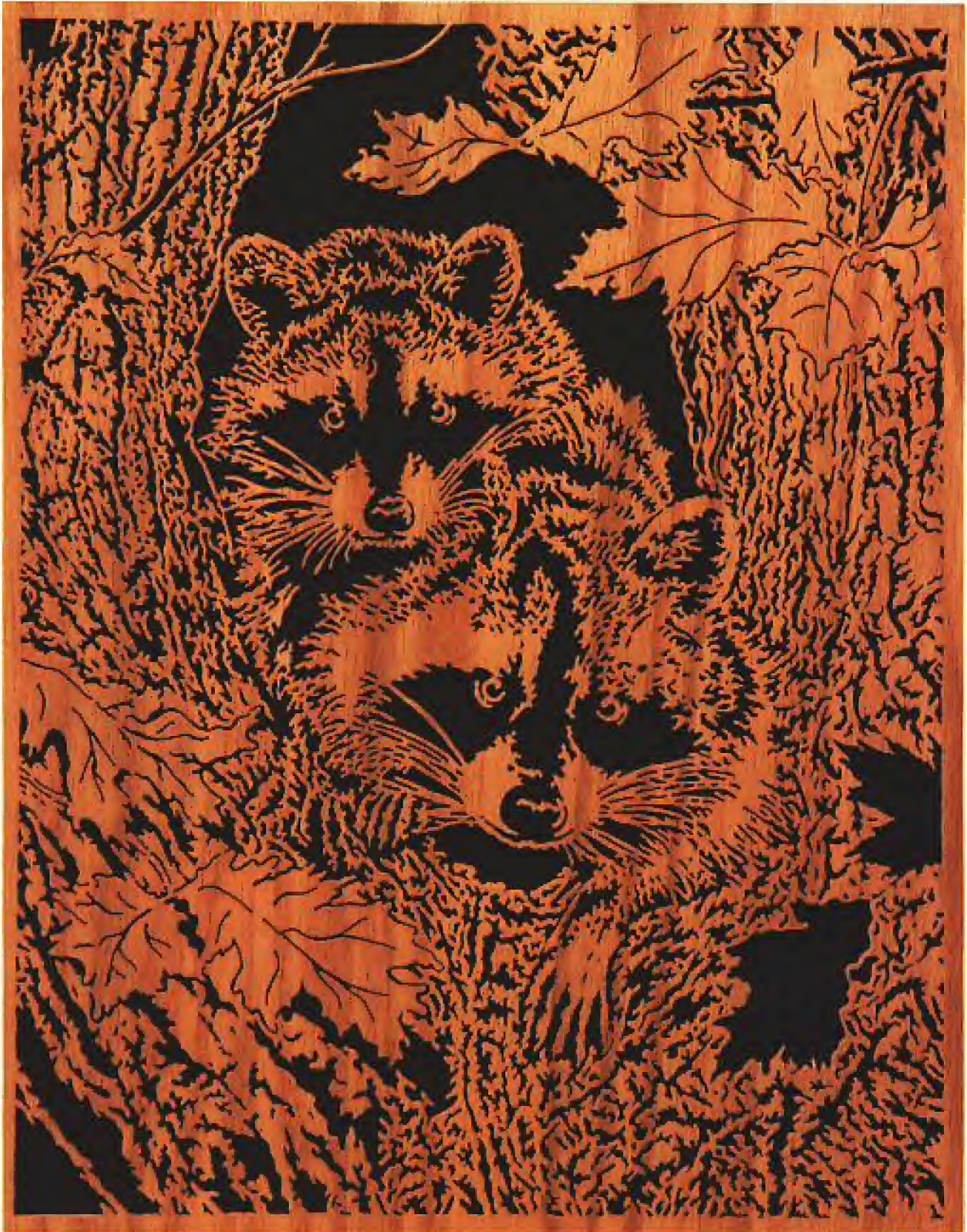
For questions concerning this project, email Wayne at k.wboster@juno.com.





Double Trouble

by Jeff Zoffino



SUPPLIES

Wood: oak ply or wood of choice—one piece 1/8" to 1/4" x 11" x 14"
Tools: scroll saw with Flying Dutchman No. 2/0 spiral blades, or blades of choice; drill with No. 68 bit; Bernzomatic plumber's torch
Temporary-bond spray adhesive
Blue painter's tape
Masking tape
220-grit sandpaper
Clear coat finish
Small container with oversized toothbrush
Paint thinner
Black felt or backer of choice

Introduction

As soon as I saw the original image on which this project is based, I simply knew it had to be cut in wood. Over the years, there have been several images I have seen that cried out to be cut, but this one made my ears ring! The original image for *Double Trouble* was etched into scratchboard by an extremely talented artist, Mariena Richter.

In case you don't remember, scratchboard is that paper you "played" with in elementary school art class. It was covered with a black, clay-like substance, and you used an object resembling a pin to scratch away the covering, revealing the underlying colored paper. Scratchboard artists achieve a tremendous level of realism in their works, using minute scratches and delicately-placed hand colorings. The scratched-away covering adds texture that simply must be seen to be believed.

I am extremely fortunate to have developed a working relationship with Mariena, and she has graciously allowed me to transform several of her fantastic scratchboard works into scroll sawn art. Those of you with a keen eye will likely recognize her style in several of my patterns. While the designs I have developed from her work have been among the most difficult I have ever attempted, they are also among the most rewarding.

I count this particular piece in my "top three favorite" all-time designs I have developed (and that is after spending approximately 70 hours redrawing the pattern to try to do Mariena's work justice, coupled with the 1019 cuts and 40 or so hours of the saw!). I hope you find cutting this piece just as rewarding.

INSTRUCTIONS

Preparing the wood

For those of you who have tried some of my past projects, you know I have a penchant for developing some extremely delicate patterns. Well, if we label those patterns "delicate," we'll need to find a new word for this cutting! One friend who saw the raccoons cutting thought "lace" might be fitting, but it simply wasn't manly enough for me!! So, let's just say that this piece will be "Extremely Delicate" when completed. Because of that, you should plan for how you will handle the piece, both on and off the saw. While I always suggest studying a design before

cutting it, that extra planning time is especially important when cutting a piece such as this, where the wood you are cutting will take on the rigidity of cooked spaghetti before you are finished! By planning for that ahead of time and devising your cutting strategy, you will greatly increase your odds of success. I am not telling you this to scare you; rather, I think it is important to know exactly what you are getting into before you are "up to your neck in alligators," as my friend Dirk Boelman would say. Once you feel confident with your game plan, it's time to head out to the shop, and stir up some dust.

Stack a few pieces of grade A-4 oak ply. Secure the stack by adhering blue painter's tape lengthwise along the edges of the wood, and taping the tape around to the back of the wood. Pull the tape fairly hard to ensure a good, tight stack.

I recommend applying a HEAVY coat of spray adhesive to the back of the pattern. Although the very heavy coat of glue will make the pattern more difficult to remove after cutting, this pattern is full of long, very thin areas that will have a tendency to lift during cutting if you don't use a sufficient amount of adhesive. (The only thing worse than trying to cut a very delicate area that has minimal room for error is trying to cut that same area with the pattern lifting up, so you can no longer tell where the cuts stop!) The heavy coat of adhesive will help prevent that from happening. (We will deal with removing the glue later.)

After applying the pattern, head over to the drill press, and drill the blade entry holes. I try to drill the holes in the order in which I will be cutting the piece. This allows me to better determine where to drill the holes, and it also reinforces my strategy. I drill all the holes in one shot, but feel free to drill your holes however you like. I cut this project using my favorite blade, the Flying Dutchman No. 2/0 spiral, so I drilled my entry holes using a No. 68 bit.

Cutting

It is now time to head to the saw, and sink your teeth into the cutting (pun intended!). I first cut the lower raccoon, I worked up from there to the upper raccoon, then out into the hole in the tree. The scrolling is pretty straightforward. If you study how each cut affects the next one, you will be fine.

continued on page 38



After cutting the hole in the tree, I needed to decide how to finish cutting the bark of the tree. I chose to start with the upper right hand part of the pattern, working out from the hole in the tree. I worked diagonally from the hole to the edge of the project, and then continued those diagonal lines down to the bottom of the right side. (The photo helps illustrate the technique.)

When I reached the bottom right side of the project, I stopped my cuts in the center, at the vertical line in the bark just to the left of the raccoon's paw. I then moved to the top of the left hand side and moved down, following the same process. I worked over the top of the leaves to where I had previously stopped. I left the area with the leaves and the large long cuts in the bark for last. This provided me with a fairly good-sized section of intact wood that I could use for handling the cutting.

Finishing

To remove the dust, stand the stack up against an old window screen, and carefully blow the dust out of the cutting using an air compressor turned down to about 30 psi and a blow nozzle. After blowing out the dust, separate the pieces of wood by carefully peeling off the tape, and repeat the dust-blowing process on the individual cuttings.

If you used spirals to cut this piece like I did, you now have to deal with those pesky fuzzies that the spiral blade inevitably leaves behind. Don't fear; I have a tried-and-true method to get those little buggers off your project in no time flat! Begin by standing the cutting against a piece of scrap wood, such as a 1 x 12, that is big enough to completely cover the piece, with the back side of the cutting facing you. I then use a Bernzomatic plumber's torch (yes, you read that right!) to burn off the fuzzies, very much like the way they used to burn off the pin leathers from a plucked chicken. There are a few very important things to keep in mind here. First, turn the torch way down. Second, make sure the scrap wood totally covers the piece—having all the cut-outs with something solid behind them will greatly eliminate scorch marks. Third, keep the torch moving quickly, making several passes. (Do not hold the torch in one place, or you will burn through.) Last, but certainly not least, DO NOT EVER use the torch on any piece of wood that has had solvents or finishes applied to it.

After charring the fuzz, use the compressor and blow nozzle to blow off the charred fuzzies. Repeat as necessary. (Note that this process will not work if you intend for both sides of your cutting to be seen. However, it will do

nicely for us here because you will be adding a backer.)

If you get a scorch mark or two on the front of the cutting, just run a small piece of 220-grit sandpaper along the edge of the cut. It will remove all but the worst scorches quickly and easily.

So... are you ready to unveil your masterpiece and remove the pattern? It's time to pay the piper for that heavy coat of adhesive we applied earlier. Fill a small container with low-odor mineral spirits. Dip an oversized toothbrush into the thinner, and gently run it over the surface of the pattern. The goal here is to apply the thinner, not scrub off the pattern. Once you have saturated the paper, allow it to sit until the paper turns a grayish color. This usually takes less than 5 minutes. If, after 5 minutes, the paper hasn't taken on that gray color, re-apply the thinner and wait 5 more minutes. As soon as the paper turns gray, you should be able to grab a corner and peel the pattern off in almost one piece.

To ensure that there is no residue from the adhesive, dip the brush into the thinner again and, this time, lightly rub the surface of the wood with the bristles. Dab the front with a cloth diaper or dry rag to absorb the excess mineral spirits, and set the piece aside while it dries.

As long as you allow the wood to dry thoroughly before applying your finish, applying mineral spirits to the wood will not discolor it. I usually let a piece sit overnight before dipping it into a 50/50 mix of boiled linseed oil (BLO) and paint thinner. Let the piece dry overnight, then apply two coats of spray lacquer to the front and back. The lacquer helps trap any dust that may remain in the piece, and further seals the wood for protection from the elements. (As an added bonus, it covers the smell of the BLO pretty well!) Let the lacquer dry completely.

Framing

I like to use black felt for my backers because I like the contrast between the felt and the wood. Before gluing the cutting to the felt, stretch the felt around the work table, and use spring clamps to hold it taut. This will prevent wrinkles from forming on the backer. I used 3M Super 77 glue to attach the backer because this piece has so many delicate areas. Stand the piece upright, and try to spray as close to straight-on as possible to keep the glue out of the cuts. After applying a heavy coat of glue, lay the cutting directly onto the felt, and let dry.

After backing your cutting, select a frame that shows the pride you take in your work. You may even want to consider matting the cutting, and using a larger frame. I recommend that you frame pieces under glass because it helps protect them and it keeps dust off the backer.

Conclusion

Congratulations on successfully finishing the cutting. I hope you enjoy the challenge this pattern presents. Remember to enjoy the experience. Good luck, and happy scrolling!

Until next time, keep the dust blowing and the smile showing.

Jeff has been scrolling for about five years, and designing for a little over four. He is an accomplished artist with scroll saw works hanging in galleries nationwide. To see more of Jeff's work, visit his website at www.advancedscrollsawpatterns.com, or send a SASE to him at: 247 Lytle Road, Rossville, GA 30741.

To see more of Martiena Richter's work, visit her website at: www.martienarichter.com



The Sun and the Moon

pattern by Jacob Fowler; cut and finished by Wayne Fowler

Introduction

Jacob designs lots of excellent fantasy fret patterns that are very complex and challenging to cut. However, every so often, it is nice to be able to finish a piece in one sitting! Both of these pieces can be cut in less than an hour and, with the right wood, they make excellent gifts or sale items when finished as sun catchers or wall decorations. We recently marketed the sun and moon sets at the World Science Fiction Convention art show. They sold quickly, so I will be making a few more for the Christmas sales season.

The finished moon was cut from a piece of box elder burl that was just under 1/2" thick, while the finished sun was cut from a piece of asage orange that measured just over 1/2" thick. Both pieces of wood came from Edgar Werner, my local supplier. The asage orange was sitting in his sale bin, calling out to me to buy it with its wild yellow/orange color! The pieces were cut on an Excalibur EX21 saw using a No. 2R blade.

INSTRUCTIONS

Step 1. Photocopy the patterns, saving the originals for future use. I recommend applying a layer of clear packing tape to the surface of the wood, and then applying the pattern to the tape using spray adhesive. The tape seems to reduce the burn from the tight turns you will have to make while cutting, and it also makes the piece easier to handle.

Step 2. Drill all the guide holes, and make all the cuts. I recommend using a No. 2R blade to reduce chipping on the bottom of the piece while cutting, but both pieces could also be comfortably cut using a No. 5R blade.

Step 3. Remove the pattern by peeling off the packing tape. (If you did not use the packing tape, remove the pattern by applying a solvent such as paint thinner to the paper pattern. After removing the pattern, let the piece dry.)

Step 4. Use a disc or belt sander to sand the two faces of each piece. Use a 1/4 sheet of 220-grit sandpaper to remove any remaining burrs and to lightly round the edges, giving the pieces a more finished look.

Step 5. Clean the piece using a clean paintbrush or other tool of choice. Finish by applying a thin oil, such as tung or walnut oil, to seal the inner edges. Let dry.



SUPPLIES

Wood: hardwood with yellow coloring, such as hawthorne, alnthus, or asage orange—one piece 1/4" to 1/2" x 6-1/4" x 6-1/4" (for sun); hardwood with white coloring, such as maple, ash, or box elder—one piece 1/4" to 1/2" x 8" x 6" (for moon)

Tools: scroll saw with No. 2R and/or 5R blades; drill with assorted bits; fixed disc or belt sander with fine or extra-fine (120/220) disc or belt

Temporary bond spray adhesive

1/4 sheet of 220-grit sandpaper

Clear packing tape

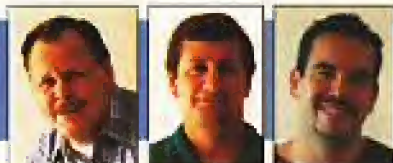
Finishing oil of choice, such as tung, walnut, or Danish

Fishing line or thin cord for hanger (optional)

Step 6. To display the pieces hanging in a window, drill a small hole where indicated on the pattern, and string fishing line through it for a hanger. Either drill the hole before you cut the piece, or very carefully drill a small, 1/32"-diameter hole on the finished piece. The designs could also be enlarged and displayed as wall decorations, provided your pieces of wood are wide enough to accommodate the larger pattern.

Send questions concerning this project to: Wayne Fowler, 33 Longmeadow Cres., Markham, Ontario, Canada L3R 3J6, or email him at: fantasiesaw@rogers.com.





Wilderness Canyon

by Roy King, Scott Kochendortter, and Bob Valle of White Tail Designs, Ltd.



INSTRUCTIONS

Step 1. Photocopy the pattern, saving the original for future use. Trim the pattern to fit the piece of maple. Apply a light coat of temporary-bond spray adhesive to the back of the pattern, and allow the adhesive to slightly dry until it feels tacky like masking tape. Attach the pattern to the wood. Cover the pattern area with clear packing tape. (The tape lubricates the blade, which helps prevent burning.)

Step 2. Drill for all entry holes. Cut out all internal portions of the design, but do not cut the perimeter lines yet.

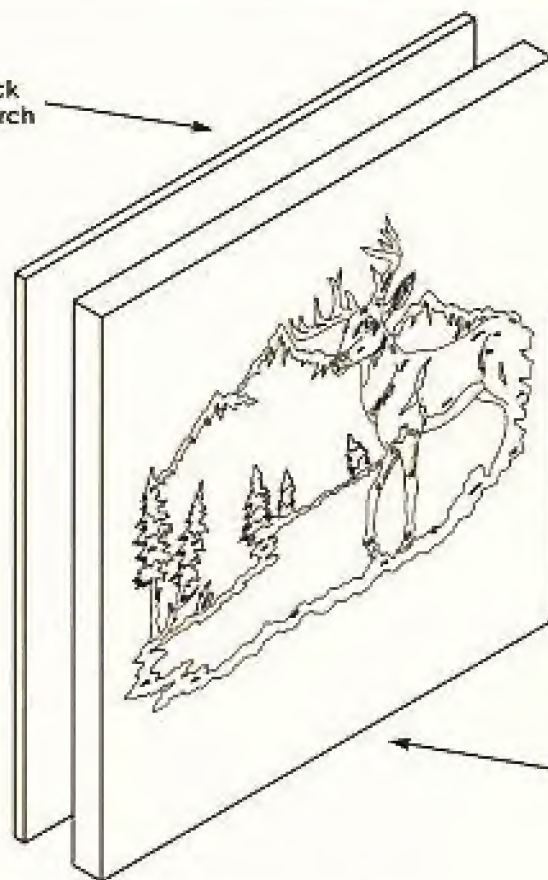
Step 3. Using masking tape, attach the piece of plywood to the back of the maple, aligning the outer edges. Finish cutting the perimeter of the pattern, cutting through both thicknesses of wood at the same time. This will ensure that



SUPPLIES

Wood: maple or wood of choice—one piece 1/4" x 9" x 6-1/2"; Baltic birch plywood—one piece 1/8" x 9" x 6-1/2" (for backboard)
 Tools: scroll saw with No. 2/0 or No. 2 reverse-tooth blades; drill with 1/16" drill bit
 Temporary-bond spray adhesive
 Clear packing tape
 Masking tape
 Sandpaper in medium and fine grits
 White craft glue
 Polyurethane spray in satin finish, or clear finish of choice
 Flat black spray paint
 Hanger

1/8"-thick
Baltic birch



1/4"-thick
maple

Fig. 1
Attach plywood to maple before cutting perimeter lines.

the backboard exactly matches the plaque outline. Separate the two pieces and remove the masking tape.

Step 4. Using flat black spray paint, paint both sides and all edges of the backboard. Let dry. Apply the clear finish to the plaque, being certain to cover all the surface areas and fret-cut holes. Using white craft glue, attach the backboard to the plaque, being sure to align the edges. Set

the piece on the work surface, place a weight on top of it, and let dry. Attach your hanger of choice to the back of the plaque.

For questions concerning this project, send a SASE to: White Tail Designs, LTD., 17713 South 66th Ct., Tinley Park, IL 60477, or email to: scrolled1@comcast.net.





Wes' Wood Pile

by Wes Demarest

Paulownia

Paulownia tomentosa is also known as Royal Paulownia, Foxglove Tree, Empress Tree, and Princess Tree. The photos included in this article are of the tomentosa species, but there are at least six others sold and grown throughout the United States and parts of Canada. They share many common traits, although their blossoms vary in color.



All Paulownia species are native to eastern Asia. The Japanese and Koreans introduced them to their soils centuries ago, and the species has since become an important part of their culture and heritage.

Tomentosa was brought to Europe in the early 1800s, and to the United States around 1840. The genus was named in honor of Queen Anna Pavlovna of the Netherlands (1795-1865) who was the daughter of Tsar Paul I of Russia. One report has it that its introduction was

somewhat accidental. It seems that the seeds were used for packing delicate china imported from the Orient, and once the cases were opened, the seeds spread in the wind. There are other reports that they were brought here for landscaping and ornamentals because of their beauty, shade, and fast growth rate. Regardless of intent, it is now naturalized from central New York State south to Florida, westward to Texas, north to Illinois, and eastward back toward New York. It also appears in parts of Oregon. Although it does not tolerate severe freezing, Paulownia is very tolerant of soil conditions to elevations of slightly over 2000 feet.

The extremely fast-growing Paulownia has a normal annual growth rate of between 5' to 7', with 12' to 15' per year not unusual. Its mature height ranges between 25' to 75' tall, with diameters of 1' to 2-1/2', depending upon the region in which it is grown. The larger specimens are found in the south, in its native range and in Australia, they grow much larger—so large, in fact, that it would take three or more adults with hands joined to reach around the trunk.

As is typical of many species, open grown trees normally branch at the base, as seen in the photo. However, when planted in closer proximity, they will grow a single straight trunk that will yield a decent saw log.



When young, Paulownia bark is similar to *Ailanthus* in texture, but it is more brown to black in color, whereas *Ailanthus* is more gray than brown. As it grows, it develops ridges and vertical cracks with inter-connected smooth areas. The Chinese have used the inner bark for medicinal purposes, and recent scientific studies indicate that it has certain antiviral properties.



The leaves are very distinctive. The only species with similar-looking leaves is Catalpa, because both have large, heart-shaped leaves. However, Paulownia leaves are more almond-shaped, with a smooth edge and possibly very fine teeth, while Catalpa leaves have a longer tapering tip. The Catalpa also bears its leaves in a whorl of three leaves, and Paulownia does not.



The name "Foxglove Tree" is very appropriate because, as the name implies, the large, beautiful, and fragrant flowers resemble the foxglove flower. They appear before the leaves in spring, and the lilac-blue flowers stand out well in the spring landscape. The flowers also provide an important source of nectar for honeybees.



The undersides of the leaves have very fine hairs, but the amount of hair varies with the age of the tree and the location of the leaf on the tree. The leaves are soft, with the underside being a grayish green color when turning in the wind. They turn red in autumn.



The trees bear a prodigious number of seedpods, and each pod will contain at least 20,000 seeds. They are very small and look more like pepper than tree seeds. The pods in this stage are quite sticky, as are the twigs.

continued on page 44



Another field identification characteristic is that the dry pods will remain on the tree long after the seeds have been dispersed. (Notice the dry pods in the photo of the flowers on the previous page.)



In addition to its beauty, the wood of the Paulownia is amazing. The last time I worked with it was when I was cutting timber in the early 1970s. At the time, it was fetching nearly \$10 per board foot on the slump (out of my price range!), and the "right tree" brought even more. In fact, one Asian buyer who was buying straight limbs would even have taken everything down to 4" in diameter if the crooked limbs didn't take up so much space in a shipping container! That gives you an idea of the importance this wood holds in the Orient.

An ancient Chinese legend about the Phoenix (which is nothing like the Egyptian or Grecian stories) tells that the Phoenix nested only in Paulownia trees in peaceful and prosperous times, or at the beginning of a new era. It would also hide in them when there was trouble. When the

Phoenix left, however, bad times soon followed. Throughout history, and even today, many people plant Paulownia hoping that the Phoenix will nest there.

In Japan, where Paulownia is called "Kiri," a father plants a tree upon the birth of a daughter. When she marries, he cuts down the tree and uses the wood to make a dowry chest for her.

The wood is one of the strongest for its weight in the world, exceeding that of Balsa by nearly ten times, and it is only slightly heavier. A 1"-thick board will air dry to 10% moisture content within a month with NO degrade. Think about that for energy savings! It works wonderfully. It does not split, it doesn't soak up glue like balsa, it holds screws well, and I have not found a glue or finish that does not work on this wood. Clear finishes really show off the grain.



"Chatoyance" is used to define the deep iridescence this wood displays. Although it is a word taken from the gem and mineral community to define the phenomenon displayed by certain gems like cat's-eye, it is now being used in the wood industry. Words aside, this wood is beautiful, with better pieces having a holographic appearance because the glow is so deep.



As you can see by the width of the growth rings, Paulownia is a fast grower, and it also has a hollow pith. It is classified as very light, strong for its weight, and with moderate resistance to shock. Although the cells are large, the wood has excellent strength and insulation properties for heat and electricity. In addition, it is very stable in service, with less than 1/8" in movement. There are conflicting reports as to its rot resistance. Some say that it is not resistant at all. However, coffins, aqueducts, and other implements made from Paulownia have been found that have been buried for centuries and were still sound. It also makes good, tight cooperage.



The wood has a high silica content, which causes a dulling effect on your cutting tools. It is very easy to work with hand tools, but it tends to fuzz. It also requires the application of a sanding sealer in order to achieve a smooth finish, especially when it is worked with power tools.

Even though my plane was freshly honed, it is obvious that it still collected a good amount of fibers.

The wood has many uses, including timber for construction, craft items, wooden airplane frames, cores for surfboards and guitars, and furniture. It also carves quite well. Besides having beautiful wood and being a good ornamental, Paulownia grows in nearly any soil, is excellent in reclaiming mine dumps



and sites, and its soil-conditioning leaves are eaten by animals. However, just when you get the idea to run out and plant a tree or two, consider this: a number of states are now listing Paulownia as an invasive, and they would like to stop further planting of the species. This applies not only for plantations and commercial purposes, but for lawn ornamentals, as well. Some tree farmers have extensive and growing plantations, while others are intercropping their Paulownia with shade-tolerant crops or grazing livestock with them.

The wood is commercially available through several growers and some small sawmill operations. It is not a dominant woodland species, and it is only harvested incidentally when included in a timber job or land clearing. Presently, it is priced anywhere from \$1 to \$15+ per board foot, depending on the quality of material.

If you have further interest in this species, I strongly recommend visiting the website of The International Development Research Centre Library (www.idrc.ca) and doing a search on paulownia. The Library's mailing address is: P.O. Box 8500, Ottawa, ON Canada K1G 3H9; phone (+1-613) 236-6163; email: info@idrc.ca. There is also a helpful blog site by John Peter Thompson, (<http://ipetrus.blogspot.com>), who is well qualified in this area.

For questions concerning this article, send a SASE to: Wes Demarest, 66 Snover Road, Sussex, NJ 07461; or email him at: wes@woodworksandcrafts.com.



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Seasonal Door Topper

by Sue Mey



Introduction

Make your entryway festive this season with this heart-embellished door topper. Hang beads, ornaments, or holly from it to create a colorful display. Or, continue a centuries-old tradition by hanging mistletoe from it, and exchange a kiss under it as a sign of friendship, goodwill, or love.

The door topper shown was cut from MDF, and spray-painted in the traditional Christmas colors of green, red, and gold. I use spray paints because they are easy to apply and provide a smooth finish, but several coats of acrylic paints can be applied, instead. The door topper is not heavy, so it can be attached to the door or wall surface using re-usable adhesive.

Depending upon the throat opening of your saw, you may have to cut the project in two or three pieces, and glue them together. The full-size pattern is provided in the pattern section, but if you need to cut the project in two pieces, simply cut the pattern in half along the dotted line. Instructions are provided for cutting the project full-size and also for cutting it in two pieces and gluing the pieces together. I've listed two pieces of 1/8"-thick MDF in the supplies list because I recommend stack-cutting pieces that are this thin. Therefore, if you cut the full-size pattern, you will cut two door toppers at the same time. However, if

SUPPLIES

Wood: MDF (medium density fiberboard) or wood of choice—one or two pieces 1/8" x 21-1/4" x 6"

Tools: scroll saw with No. 3 reverse-tooth blades; drill press with 1/16" and 1/32" bits; sanding block; scraper blade

Temporary-bond spray adhesive

Wood glue

Craft glue or cyanoacrylate (CA) glue

Masking tape

Sandpaper, assorted grits

Spray paint in gold, green, and red

Stiff-bristled paintbrush

Lint-free cloth

Wood beads or small shapes with rounded edges

Thin gold string

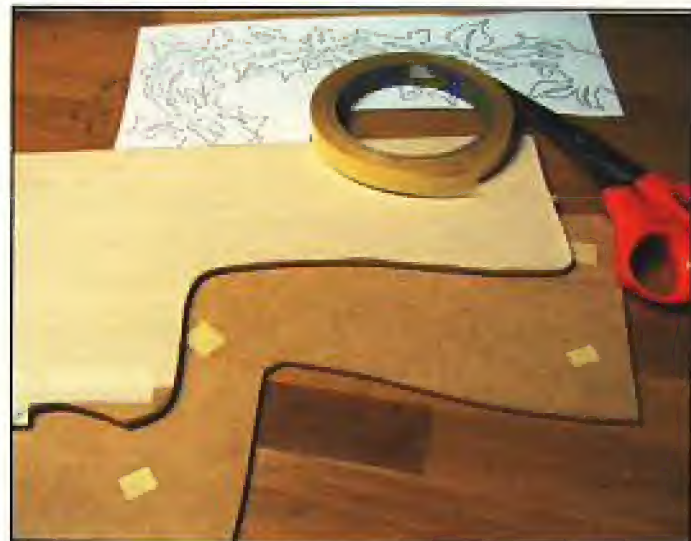
Re-usable adhesive, such as type used to hang posters

*See note in introduction regarding amount of wood required.

you are cutting the door topper in two pieces, only one 21-1/4'-length of MDF is needed because you will already be stack-cutting the two halves. [Note that this will only yield one door topper, though.]

If you would like to frame a larger doorway opening, simply enlarge the pattern to the size needed. To provide extra stability to a larger door topper, you may want to add a backing or use 1/4"-thick MDF.

INSTRUCTIONS



Step 1. If you are cutting the project in two pieces, rather than one full piece, cut the MDF in half, and join the two work pieces using small pieces of double-sided tape. Otherwise, stack the two full-length pieces of MDF, and secure them with tape.



Step 2. Copy the pattern, saving the original for future use. Apply a layer of masking tape to the top surface of the MDF. Using temporary-bond spray adhesive, attach either the full-length or half pattern on top of the tape.



Step 3. Drill the majority of the blade entry holes using the 1/16" bit. For the smaller openings, use the 1/32" bit.



Step 4. Use sandpaper or a scraper blade held at a slight angle to remove the burrs created by drilling the holes.



Step 5. Thread the No. 3 reverse-tooth blade through the blade entry holes, and make all the pierce cuts on the pattern.

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Step 6. Cut out the 18 round berry shapes and the 4 triple-berry clusters, which will be attached later.

Step 7. Also cut out the heart piece.



Step 9. Remove the patterns by peeling off the masking tape.



Step 10. Carefully pry the work pieces apart using a scraper blade. Using 320-grit sandpaper, remove all burrs by sanding the back and front of all work pieces. You can either sand by hand or use a sanding block. Use a stiff-bristled paintbrush and a lint-free cloth to remove all sanding dust.



Step 8. Cut along the perimeter of the pattern.



Step 11. If you cut the project in two pieces, use wood glue to join the two mirror images into one large piece, and let dry.



Step 12. Apply several thin coats of green spray paint to the door topper, allowing each coat to dry thoroughly before applying the next.



Step 15. Referring to the photo for placement, glue the berries and heart in place using craft glue or CA glue, and let dry.



Step 13. Paint the berry shapes and heart using red spray paint.



Step 16. Attach the beads and small decorative pieces to thin gold string, either by threading the string through the holes or gluing it onto the items. Attach the string to the door topper by gluing it in place, or by knotting it at the back of the project. When all glue is dry, mount the door topper to the wall using re-usable adhesive.



Step 14. I spray painted some beads and other small decorative pieces using red and gold paint.

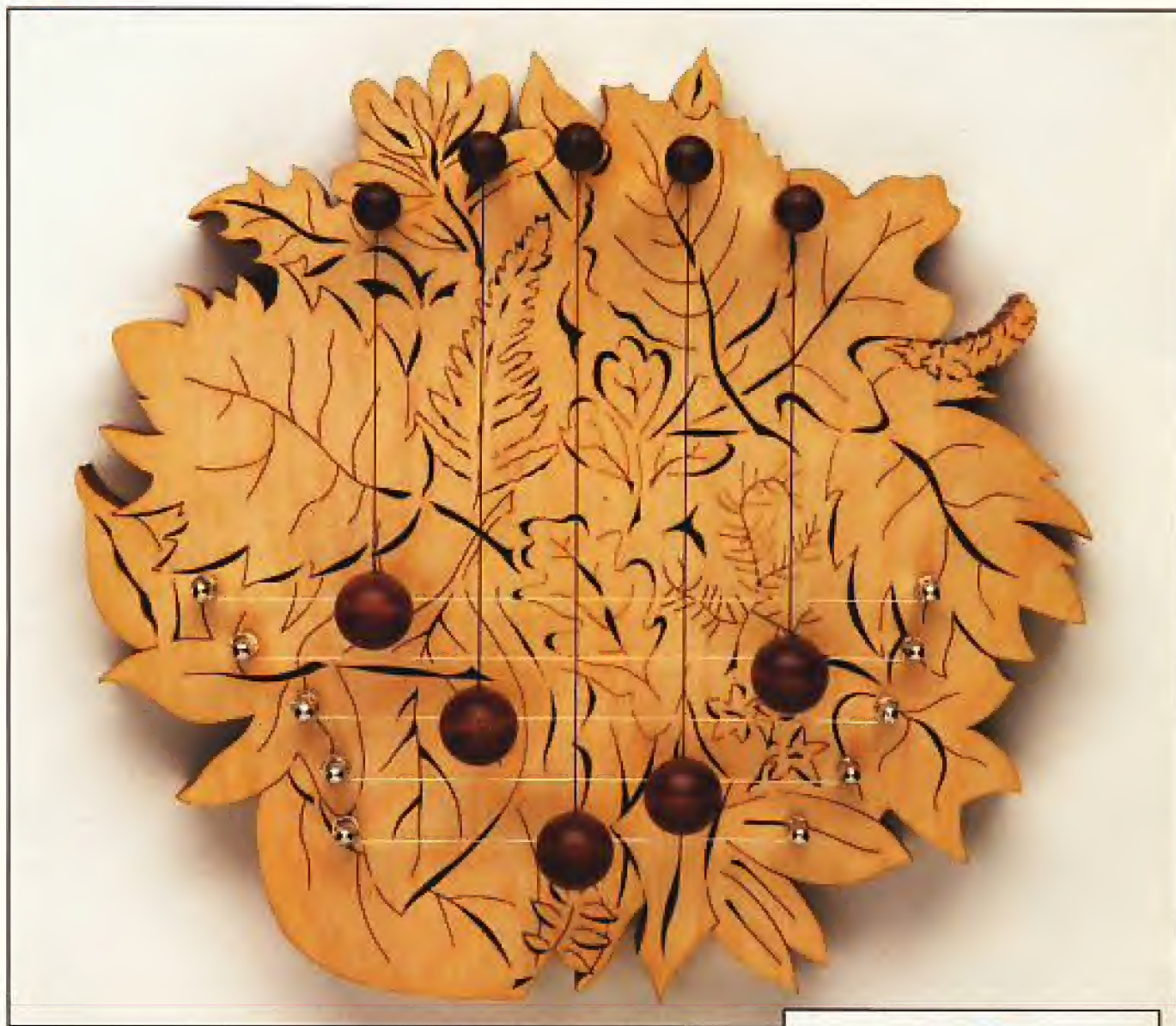
I live in Pretoria, South Africa, and have been scolling for about 12 years. I can be contacted at 27-82 492 5869 (cellular), or via email at: suem@storage.co.za. To see more of my work or patterns available to purchase, visit my website, www.geocities.com/meydenhart.





Harvest Leaves Door Harp

by Robert Betting



Introduction

We were so happy when Bob provided us with this creative project to include in the magazine. Unfortunately, the full beauty of the door harp cannot be captured in a photo, because so much of its charm rests in its beautiful sound. Take our word for it, though—the sound of the clapper balls striking the wires is simply lovely, and will make a warm welcome for all your guests!

INSTRUCTIONS

Step 1. Make several photocopies of the patterns, saving the originals for future use. You will need one copy of the leaf design pattern for the front panel. Three copies of the frame/back panel pattern will be needed: one to cut the chamber; one for the hanger hole; and one for drilling the tuning pin and shaker peg holes. Trim the pattern copies along the 10-1/2" x 10-1/2" outlines. (Note that the outline for the front panel is a solid line and the outline for the frame/back panel is a dashed line.)



SUPPLIES

Wood*: hard wood with nice edge pattern, such as white ash, padouk, zebrawood, or honey locust—one piece 3/4" x 10-1/2" x 10-1/2" (for frame board, with face grain running vertically); Baltic or Finnish birch plywood**—one piece 1/4" x 10-1/2" x 10-1/2" (for back panel); Finnish birch plywood**—one piece 1/8" x 10-1/2" x 10-1/2" (for front panel)

Tools: drill press with assorted bits; scroll saw with assorted blades; orbital hand sander with assorted-grits sandpaper; rotary tool and diamond grinders; clamps; small flush-end wire cutter; small needle-nosed pliers; hobby knife; scissors; zither tuning pin wrench (optional)***

3M Super 77 temporary-bond spray adhesive

Office Max clear packaging tape

Wood glue

Aleene's Platinum Bond super gel glue

Epoxy delayed-set super glue (not quick-setting)

Shaker pegs, 1-3/4"-long (five)***

Clapper balls, 3/4"-diameter (five)***

Round hardwood toothpicks with center diameter of 1/16" (or slightly wider)

Quilting thread in color of choice for hanging clapper balls (available in hobby and sewing stores)

Music wire, approx. 8'***

Zither tuning pins (ten)***

Flat black acrylic paint

Danish oil

Minwax paste finishing wax, or finish of choice

Wood stain and finishes of choice

Paintbrushes for paint, stain, and finish application

*Note that the frame pattern will require a wide board. It is difficult to buy unwarped 3/4"-thick boards this wide, and they are significantly more expensive. You can edge-glue three or four narrower pieces to obtain a board that is wide enough. Be sure the edges are square so the glued board will not bow after gluing. Scrape and sand to remove all glue.

** Available through Sloan's Woodshop, www.sloanswoodshop.com, 1-888-615-9663. (You can buy plywood from your local lumber yard, but it is likely to have voids (holes, knots or rotting) in the inner plies, which would ruin your scrolled pattern or the side view.)

***Shaker pegs, clapper balls, music wire (and roll dispenser), zither tuning pins, and T-shaped tuning pin wrench available at: Meisel Hardware Specialties, www.meiselwoodhobby.com, 1-800-441-9870; shaker pegs and clapper balls available at: Benny's Woodworks, www.bennyswoodworks.com, 1-800-255-1335; diamond-tipped grinders available at: Eloxite Corp., www.eloxite.net, 307-322-3050; zither tuning pins and T-shaped tuning pin wrench available at: Stewart MacDonald's Guitar Shop Supply, www.stewmac.com, 800-848-2273.



Step 2. Sand both faces of all three pieces of wood, and stack them in the order in which they will be assembled, with the leaf design front panel on top, the 3/4"-thick frame piece in the middle, and the back panel on the bottom. Mark the front and top of each piece of wood in the waste area. These markings will assist in laying out the patterns.

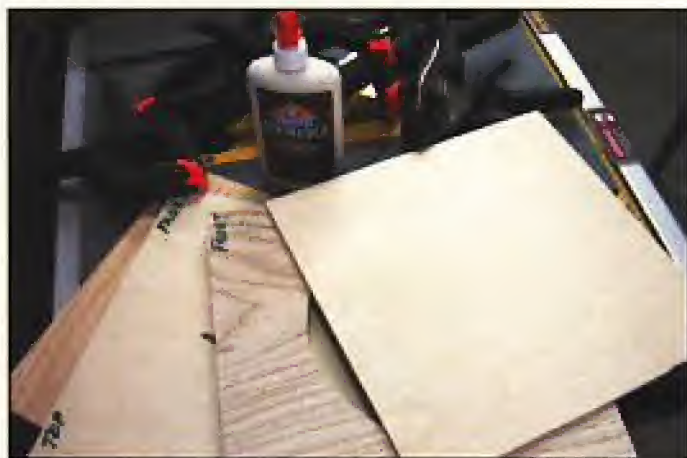


Step 3. Apply a layer of clear packaging tape to the front of the frame board piece. (The tape will increase blade lubrication.) Using temporary-bond spray adhesive, attach the frame/back panel pattern to the frame work piece, making sure the edges line up correctly. Cut out the resonance chamber, staying as close to the pattern line as possible. (Although it wouldn't typically be necessary to follow the pattern line exactly, variances to the shape of the chamber will change the balance of the harp, which would mean the position for the hanging hole would be incorrect.) Remove the tape and pattern. Sand off any glue residue and burrs.

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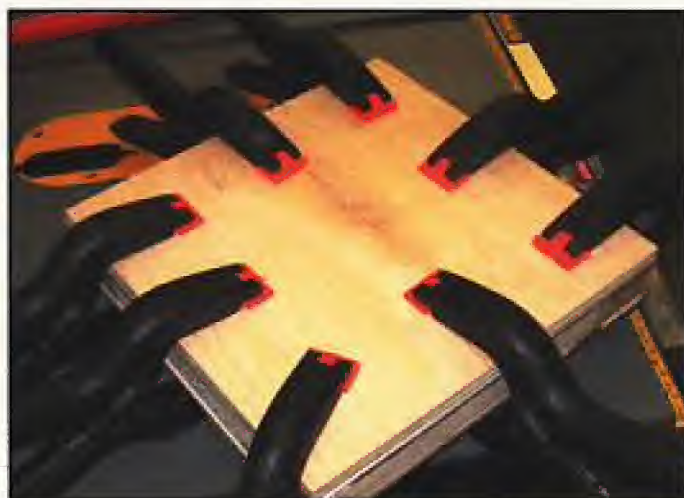
Step 4. Using temporary-bond spray adhesive, attach another copy of the frame/back panel pattern to the inside face of the back panel, and cut out the hanging hole. Remove the pattern and glue residue. Smooth the edges of the cut.



Step 5. The back panel needs to be glued to the frame. In order to do so, first apply wood glue to the back of the frame, covering the entire surface, but being careful near the opening for the resonance chamber. (You do not want glue to be squeezed out into the opening.) Position the frame on the back panel, being sure the edges are aligned and that the front/top markings match. Use packing tape to secure the pieces. Clamp the stack of the frame and back panel between two pieces of non-warped scrap plywood or hardboard that are at least 1/4" thick.

Locating the hanging hole

The instructions provided for the door harp assume that the pattern size will not be reduced or enlarged. If you do change the pattern size, be aware that the location for the hanging hole will need to change because the balance of the harp will have changed. For more information on locating the hanging hole and creating a door harp jig, visit Bob's website at www.WoodworkersArt.com, and following the prompts for "About Us," then "Free Patterns," and finally "Door Harp Jig Pattern."



Step 6. Clamp the four pieces securely at several points, especially along the exterior lines of the harp. Most wood glues have a 5 minute set-up time, so be sure to have the clamps ready before applying glue. After letting the glue dry completely, remove the clamps. Also remove any glue squeeze-out from the resonance chamber.



Step 7. To emphasize the cuts in the front panel, paint the inside of the resonance chamber using flat black acrylic paint. Also paint the face of the frame because it will be visible through the front panel openings.



Step 8. I find it very difficult to accurately scroll an intricate pattern in 1/8"-thick wood. Therefore, I used clear packag-

ing tape to attach the front panel to a piece of 1/4"-thick scrap hardboard. (By doing so, it also keeps the reverse side of the front panel much cleaner, and reduces the chances of tearing out a delicate portion of the cutting.) Apply a layer of packaging tape to the face of the front panel, then attach the leaf pattern to the tape using temporary-bond spray adhesive. Be sure to keep the edges of the pattern and the wood aligned.



Step 9. Place the front panel on a backing board on the drill press table to prevent breakout on the bottom of the scrap piece. Drill the blade entry holes using a 1/8" bit for the larger access holes, and a 3/64" or 1mm bit for the smaller areas. This will create holes large enough to accommodate a No. 2 blade, which should be used to give enough definition to the cuts. Make the interior cuts of the pattern. (In order to easily insert the blade, you may want to sharpen the end of it on a grinder.)



Step 10. Beginning near the center and cutting the more delicate portions first, scroll the leaf pattern. Drill access holes outside the pattern where interior lines join the outline of the harp, and make the interior line cuts. Do not cut any exterior lines yet. The perimeter of the design will be cut simultaneously with the frame and back panel, after they are assembled. (Note that the pattern was drawn by hand, not through a computer program. Because of this, some of the lines, especially when viewed through a saw magnifier, will appear uneven. Your scroll saw cuts will be much smoother. Cut the darkened areas as waste.)

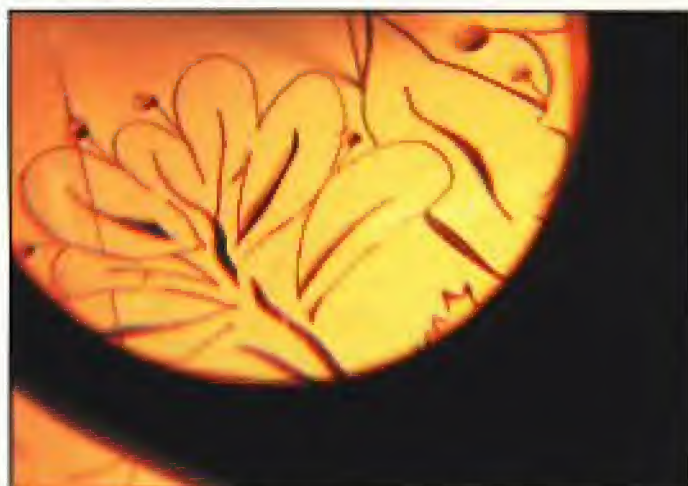


Step 11. Separate the front panel from the scrap piece. Do not remove the pattern yet because it will be used to cut the outline of the harp. (If you do choose to remove the pattern at this stage in order to check your scrolling, you will need to make another photocopy of the pattern and reposition it on the front panel. However, be aware that it will be very difficult to correctly align the pattern with the exterior and interior cuts already made.) Place the front panel face-down on a flat work surface, and lightly sand the back of the panel to remove any fuzzies. Also clean the sawdust from the definition lines (the interior saw cuts of design details) by inserting a small, threaded needle into each cut, and running the thread down the sides. Alternatively, use the dull side of a hobby knife blade.



Step 12. Use a putty knife to apply epoxy delayed-set super glue to the top edge of the frame, being sure the glue thoroughly covers all exterior edges that will be cut. Be careful not to apply too much glue near the opening for the resonance chamber. (Wood glue shouldn't be used because it will not adhere well to the acrylic paint.) Align the edges of the front panel with the edges of the frame, matching up the tops of each, and press the front panel in place. (Don't worry about glue squeeze-out on any exterior edges.) Clamp the pieces together, using a 1/4"-thick scrap piece to protect the face panel. Let the glue dry thoroughly. (For photography purposes, the frame piece is shown unpainted.)

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Step 13. Make sure the blade of your saw is set to exactly 90°. Cut the perimeter of the pattern, cutting to the outer side of the lines. You will be cutting through all three pieces of wood. I recommend using a No. 6 or No. 7 blade, but variations in brands, tooth configuration, and personal preference all play a part in blade selection. When cutting the outline, it is more important to cut a smooth-flowing line rather than following the pattern line exactly. If your cut does happen to veer off the line, use a fluid movement to return to it, rather than making an abrupt correction. (Be aware that significant variations from the pattern shape will cause changes to the hanging balance, however.)



Step 14. Because removing the packaging tape and pattern by simply pulling them off may cause some damage to delicate areas of the pattern, I recommend first soaking the tape and pattern in odorless paint thinner (mineral spirits). You can apply the thinner using a paintbrush, or place the door harp face-down in a cookie sheet or aluminum foil pan that has a small amount of thinner in it. The tape and pattern should be ready to be removed in approximately 30 minutes. If they are still stubbornly stuck to the wood, let them soak a little longer in the thinner. (Some tape adheres more than others; I have found that the Office Max packaging tape works well.) After removing the tape and pattern, remove any remaining glue residue by wiping a cloth soaked in paint thinner across the surface of the wood. When completely dry, lightly sand the surface, and vacuum any residue out of the scrolled design.



Step 15. Trim the edges of a copy of the resonance chamber pattern, and tape it to the front of the harp. The holes for the ten tuning pins and five shaker pins need to be drilled. If desired, use a spring-loaded center punch to make guide holes for the drill. Drill the 3/16"-diameter tuning pin holes 15/16" deep. Drill the 1/4"-diameter shaker peg holes 5/16" deep. (When drilling through scrolled areas, some wood may tend to chip out from the definition lines. Because of this, be extra careful and very gentle while drilling.)



Step 16. Sand the sharp edges of the harp. Apply your finish of choice. I chose to use Danish oil for the initial finish treatment. (It wasn't feasible to do a two-tone finish with the edges stained because of the harp outline.) Because the frame edges required a considerable amount of oil absorption, it was more efficient to soak the piece in the oil, rather than repeatedly apply the oil with a brush. For the final finish, I applied Minwax paste finishing wax to the harp face. However, I spent a great deal of time cleaning wax from the scrolled areas, so you may prefer to spray on a polycrylic or lacquer finish instead.



Step 17. Use a tuning pin wrench to install the *other* tuning pins. (A T-shaped wrench is the most dependable, although an L-shaped key or 5mm socket will also work. A box end wrench or small crescent wrench may be more likely to slip and gouge the new finish.) As you are looking at the harp face, screw in the left-side pins first. Turn them until the thread tops are even with the surface of the wood, then back them out one full turn. Screw in the right-side pins in the same manner, but do NOT back them out one turn. The holes in the tuning pins should all be facing approximately 4:00, which makes it easy for feeding the wire through them. (By installing the pins in this method, the left-side pins can later be turned clockwise, which will tighten the wires and allow for tuning.)



Step 18. Measure the length of wire needed to reach from one left-side pin to its match on the right side, and add approximately 10" to that measurement. Cut the wire to that length. Insert one end of the wire into the bottom hole of the right-side pin, leaving approximately 1" at the end. Bend the end of the wire up toward the top of the pin so the wire end is vertically against the pin. Wrap the other end of wire three times around the pin and the short end of the wire in a clockwise direction. From the underside of the right pin, bring the wire across to the corresponding left pin. Insert the wire up through the hole, pull it tight, and

wrap it clockwise three times around the pin. Finish by running the end of the wire up through the pin again. The music wire should be on the bottom of both tuning pins. Turn the left pin clockwise to tighten the wire until it yields a pleasant sound when plucked. As you turn the pin, gather the wire neatly onto both pins. Back off the pins as necessary to clip the wire end at each pin. Retighten the wire, but don't try to tune it until later. Install the remaining four wires in the same manner.

Note that when installing the tuning pins and wires, it is very easy to mar the finish (and to jab your fingers!). Be very careful with the tools and sharp ends of the wire. I suggest practicing winding the wire on some tuning pins that have been inserted into scrap wood before installing them on your harp. Do not use much pressure if you use pliers to pull the end of the wire tight because this will crimp and weaken the wire at the pin, causing it to break when tuned. Tighten the wires by using the wrench to turn the left pins clockwise.



Step 19. I used red oak stain to stain the clapper balls and shaker pegs, but feel free to use the color of your choice. When dry, drill a 1/2"-deep hole into each clapper ball. The holes should be approximately 1/16" in diameter, in order that your toothpick can be tightly inserted into the hole. (Note that when manufacturers cut the clappers, an obvious grain pattern is created on them, which is much more apparent after staining. When the balls are hanging on the harp, you will want the grain pattern to be uniform. Therefore, be sure to drill the hole in each ball in the same place with respect to the grain.) Before drilling, cut a hole in your drill press backer board that is just smaller than the diameter of the ball. Placing the ball into the hole will prevent it from rolling while you drill.

Drill a 1/16"-diameter hole [or size that is slightly smaller than your toothpick diameter] in each shaker peg. The hole must be 7/8" from the peg shoulder [the point where the peg meets the face of the harp]. Drill the holes in the pegs as deeply as possible without going through. Use the auto-stop on the drill press to control the depth. I placed the head of the peg into a larger hole in my backer board to prevent it from rolling while drilling. [As with the clappers, a grain pattern is formed when manufacturers cut the shaker pegs, especially on the rounded ends. They should be drilled and installed uniformly.]

Finish the clappers and shaker pegs using your finish of choice. I applied a 50/50 mixture of Minwax polycrylic clear satin finish and water. For easier application, I inserted a toothpick into each ball and peg, then dipped each piece into the mix. Insert the toothpicks into a scrap piece

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of packing foam. Let the pieces drain for approximately 5 minutes before using a small brush or pipe cleaner to dab excess liquid from around the toothpicks, and to blot off any drops that gather at the tips of the pegs. After allowing the pieces to dry completely, dip them a second time into the mixture. When dry, remove the toothpicks from the holes.



Step 20. Cut five 12"-long lengths of good-quality quilting thread, which will be used to hang the clapper balls. (The quilting thread works well because it is thin, but very strong.) Cut a toothpick in half, and clip off approximately 1/8" from the end. Test-fit the toothpick into the hole in a shaker peg to make sure it fits snugly. Using a hobby knife, make a small slit into the cut end of the toothpick, leaving a 2"-long tail. Insert the thread approximately 1/8" deep into the slit. Place a small drop of Aleene's Platinum Bond super gel onto the end of the toothpick and on the thread. (The super gel provides a better bond because you are gluing to finished wood.) Cut off all but 1" of the toothpick, and push the toothpick solidly into the shaker peg. Repeat for the remaining four pegs and lengths of thread, being sure to remain consistent with having the thread on the same side of the toothpick in all the holes. (The long ends of the thread should be positioned so they will be facing away from the front of the harp after the pegs have been installed.) Wipe off all excess glue, and let glue dry completely.



Step 21. Cut the short end of the string flush with the peg using a hobby knife. Use a small, flush-end wire cutter to

clip the toothpick close to the peg, being careful not to catch the string in the cutter. Close the cutter, and use the face of the cutter to smooth and compress the cut toothpick.

Step 22. Use super gel to glue the pegs into the appropriate holes in the harp. A rubber hammer can be used to drive the pegs fully into the harp holes. (It is possible that the drilled holes will be tight enough to hold the pegs without gluing them.) Be sure that the pegs are turned correctly so that the strings will hang vertically.

Step 23. The final assembly step is to attach the clapper balls to the strings. (The clapper balls will form a design of their own, with one clapper ball assigned to each music wire. The pattern shows which wire I assigned to each clapper ball, but you can create your own arrangement. Be aware that it is easy to mistakenly assign two clapper balls to the same music wire. As you hang each clapper, tape the string (not the clapper) to the edge of the harp to avoid having it become tangled with subsequent strings.)

To attach the clapper balls to the strings, cut and split toothpicks as before. Insert the string into the toothpick slit, approximately 1/4" above the proper wire. This will allow the clapper to hit the wire at the appropriate place, which is just above the center of the clapper. Insert the toothpick into the hole in the clapper but do not use any glue. The center of the clapper ball should be approximately 1/8" below the music wire to allow it to bounce freely. Clip off all but 1" of the toothpick and 1-1/2" of the string so they don't interfere with the freely swinging clapper ball. Holding the harp securely in both hands with the music wires running horizontally, gently swing the harp to allow the clapper to bounce. The clapper must hit the wire solidly, and bounce off a few times without bobbing. If not, remove the toothpick and adjust the height until it does. (You may want to place a string level on a different wire to ensure you are holding the harp level.)

Remove the toothpick, place a drop of super gel on it, and glue it into the clapper. Recheck the twing of the clapper, again making sure the wires are horizontal. Repeat for all other clappers. Let all glue dry completely. As with the shaker pegs, clip the toothpicks and smooth them against the ball. Dab matching stain onto the toothpicks in both the pegs and clappers, and let dry.

Step 24. Tune all music wires by plucking the wire and adjusting the left zither tuning pin. (The short wires will allow for only minor adjustments.) You may choose whether to tune the wires to sound the notes of a chord, or to leave them as random notes. Hang the harp on the inside of your door on a large-headed nail or screw. If the base of the harp bounces against the door when the door is opened, or if the hanging hole isn't exactly in balance, attach a small patch of Velcro between the door and the back of the harp base to stabilize the harp.

Step 25. Enjoy your door harp!

For questions concerning this project, send a SASE to Bob at: 5 S. Allison St., Lakewood, CO 80226, or email him at farnden2@comcast.net. To see more of Bob's work and for helpful scrolling tips, visit his website at www.WoodworkersArt.com.





Candleholder Centerpiece

by Diana Thompson



Note: Do not treat the wood with any oil-based or alcohol-based products because they are flammable, and always exercise caution when using candles in a wooden candleholder.

Introduction

I'd like to start out with a few words about the safety of using candles. Never leave burning candles unattended, and always keep them out of the reach of children. With this centerpiece, always use candles that are in containers to avoid the centerpiece catching fire. The small tea light candles are sold in aluminum or clear plastic containers. While the center opening in the photograph holds an assortment of decorative balls, it can also hold a 2-1/2"-diameter candle in a glass jar. Both size candles are readily available at stores such as Wal-Mart.

Although I made the centerpiece from 3/4"-thick birch plywood, I would not recommend using plywood. The glues used in the construction of plywood dull your tools and blades very quickly. After drilling the six holes for the tea lights, my forstner bit was ready for the sharpener (or the trash!). I think even white pine would have been a much better choice for this piece.

My original idea was to call this project a "snowflake centerpiece," paint it white, and display it at holiday time. However, I liked the look of it left natural and think that it can really be displayed year-round. On with the show!

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INSTRUCTIONS



Step 1. Photocopy the patterns, saving the originals for future use. Using temporary-bond spray adhesive, attach the pattern for the base to the wood. Cut along the perimeter of the design. Using the 1/16" drill bit, drill for all inside cuts. Cut out all openings. (Note: do not cut the circular areas designed to hold the candles, as indicated in the photo. These will be drilled using the forstner bit.) If you are using plywood, you may want to change blades halfway through cutting because the plywood will dull the blades.



Step 2. Using the 1-5/8" forstner bit, drill the openings for the tea light holders, being careful not to drill all the way through the wood. Drill only until the top of the bit is flush with the wood, as shown in the photo. When drilling, align the point of the bit with the center of the circle. (Be aware that the forstner bit tends to tear the pattern loose, so be sure to have done all cutting prior to this step.)

SUPPLIES

Wood: wood of choice*—one piece 3/4" x 11" x 15" (for base and center piece), one piece 1" x 1" x 10" (for feet)

Tools: scroll saw with No. 7 and No. 5 blades; drill press with 1/16" drill bit and 1-5/8" forstner bit**; disc sander (optional); scissors; sanding block; two small Quick Grips (optional)

Temporary-bond spray adhesive

Wood glue

Sandpaper, 220- and 400-grit

3/4"-wide cellophane tape

Tea light candles in glass, aluminum, or plastic containers (six)

2-1/2"-diameter candle in glass container (optional)

Water-based wood sealer

Clear water-based polyurethane or water-based craft paint in desired color

Small paintbrushes

*See introduction regarding selection of wood

**Available from MLCs, www.mlcswoodworking.com, 1-800-533-9298, Order No. 9223



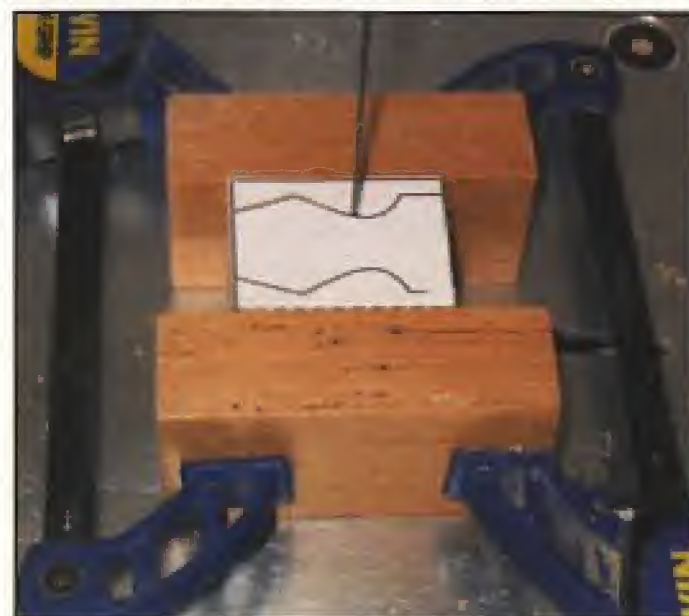
Step 3. Cut out the center piece that will hold the larger candle. Using a sanding block or other method of choice, sand the center and base pieces smooth using 220-grit sandpaper, then 400-grit. Referring to the photo for placement, position the center piece on the base with the points of the center piece pointing into the larger open spaces on the base. Glue the center piece in place.



Step 4. Fold the foot pattern along the dotted line. Using temporary-bond spray adhesive, attach the pattern to the wood by wrapping it around two sides of the block. The dotted line should be along the side of the block. Use a disc sander to ensure both ends of the block are level.



Step 6. Allowing the figure to rest naturally in the block, slightly pinch it together, and tape around it using 3/4"-wide cellophane tape. Cut the right side of the pattern in the same manner as the left. Gently remove the figure from the block. Repeat for the remaining five feet.



Step 5. Using a No. 5 blade, cut the left side of the pattern. I clamp two pieces of spare stock to the block using small Quick Grips. Tighten the grips only enough to hold the block. They should not be so tight that they interfere with the blade moving through the kerf. Using the grips allows you to keep the block level with the saw surface, and it provides you with a larger piece to hold while cutting.



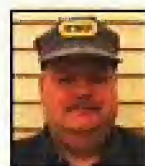
Step 7. Position a foot under each tea light opening on the bottom of the base, and glue in place. Let dry.

Step 8. Apply a water-based wood sealer to the entire project, then sand it smooth using first 220-grit sandpaper, then 400-grit. Apply four coats of clear water-based polyurethane, sanding between each coat using 400-grit sandpaper. (If you choose, apply your water-based paint color of choice to the piece after sealing it, rather than the clear finish.)

For questions concerning this project, send a SASE to: Diana Thompson, 6215 Old Pascagoula Rd., Theodore, AL 36582, or email her at: scrollergirl@aol.com. To view other designs by Diana, visit her website, www.scrollsawinspirations.com.



Basics of Wood Preparation and Dimensioning - Part One



by John Palhemus

Well-prepared and dimensioned wood is the foundation for a successful scroll saw project. Many woodworkers find preparing and dimensioning their own wood enjoyable, and the process adds yet another facet to the hobby of scrolling. This article is geared toward those who are not familiar with how wood is prepared and dimensioned at the non-commercial level. Although I'm no "expert," I hope the information I provide in this two-part series will prove useful to you.

The Tools

The tools most commonly used in this process, listed in what I consider to be their order of importance are: a jointer; a thickness planer; a band saw; a table saw; and a surface sander. Although these are the most commonly-used tools, it doesn't mean you must have all of them to prepare your own wood. You can get started with just a hand saw, sandpaper, and a lot of elbow grease...I'm not kidding! Before power tools, woodworkers had to rely on handheld planes, scrapers, and saws. It's not as crude as it sounds, and you might even find it useful to know how to resaw a thick board into thinner ones using a hand saw, so I'll even share a few tips and tricks I use.

Safety

Whenever dealing with these types of tools, a few cautionary words of advice are in order. You no doubt have learned that a scroll saw is quite a safe tool to operate. You'd have to basically pass out and fall on it in just the right manner for it to cause severe injury. However, the same can't be said for the tools used in this article. You need to respect them, but not fear them. Understanding how they work, how to correctly use them, and what to expect from them will help you develop a good working sense of these tools. And, of course, always read and follow the manufacturer's operating instructions.

Counting the cost

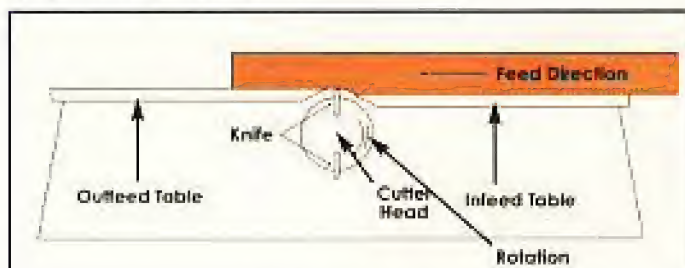
Obviously, the cost of tools can add up. The good news is that there are excellent bench-top jointers, thickness planers, and table saws that will do a line job with the lengths of wood commonly used by scrollers (be sure to check the owner's manual for the minimum safe length), and the size and prices of these bench-top models compared to floor models is noteworthy. I wouldn't recommend a bench-top band saw for dimensioning purposes because I haven't seen any that I consider up to the task of resawing thick boards into thinner ones.

You will also realize savings over time by using salvaged wood and purchasing rough-sawn lumber, rather than having to purchase finished lumber. Locate dealers of rough-sawn lumber by looking under the "Lumber" heading in your local Yellow Pages directory. Shipping pallets, discarded or yard sale furniture, and waste wood from cabinet and millwork shops are some examples of sources for salvaged wood that are available at low or no cost. If you do use shipping pallets, make sure you know what was shipped on them to avoid health hazards. Also, whatever the source of the wood, check it for any foreign objects such as dirt, stones, screws, or nails before working with it to prevent personal injury or damage to equipment.

One caveat before we continue: If the cost of wood is your only motivation for preparing your own wood, remember to consider the time and shop space that will be involved, as well. Other wood sources, such as the advertisers in this magazine, may be a better option for you.

Jointer

The jointer is a very simple machine that does such an important job that it earns first place on my list of necessary tools. Basically, it creates a perfectly flat surface and square edges, which forms the foundation for all the other steps to dimension wood.



How a jointer works

Here's how a jointer works: wood is moved over an infeed table, passes over a cutter head holding knives that cut the surface of the wood, and the wood is then moved over the outfeed table. The height of the infeed table is adjustable and is always parallel to the outfeed table. The infeed table is lowered to expose the knives in the cutter head, allowing them to cut the surface of the wood.



Adjustable infeed table with non-moving outfeed table
(For photography purposes, cutter guard is held open and fence is removed.)

In most jointers, the outfeed table is not adjustable and is often part of the overall body of the jointer (as is the case with my jointer). The knives in the cutter head are adjusted to be even and parallel with the surface of the outfeed table. The lower the infeed table, the more wood will be removed as it slides over the cutter head.



Adjustable fence

The fence (which was removed in the previous photo), attaches beside the tables. It is adjustable, which allows you to cut a desired angle on the edge of the wood.

With the fence set 90° to the tables, the surfaced face of the wood is held against the fence, and its edge is placed against the infeed table. As the wood slides over the cutter head, a perfectly flat and square edge is cut.

4'- and 6'-wide jointers are readily available in places that sell woodworking tools. Stores that specialize in woodworking tools may even have an 8'-wide jointer in stock. (Be aware, however, that the jump in width also brings a significant jump in weight and price. You don't even want to know about a 12'-wide jointer unless you're sitting down and have smelling salts handy!)

You may wonder why not just forget about a jointer, and get a thickness planer that will surface a 12'-wide (or wider) board. Except for the edges, doesn't a thickness



Jointing the edge of the wood

planer do the same thing as a jointer? Well, the answer is "yes," the planer does surface a piece of wood. However, unlike a jointer, it doesn't correct moderate cupping, warping, and bowing as it cuts the surface. (I'll explain why in the section on thickness planers.) The jointer does the job by making the cut to the bottom side of the wood. As the wood rides over the cutter head, attention is given to keeping the freshly-cut surface flush against the outfeed table. With each pass across the jointer, the surface of the wood comes closer and closer to being flat and true.

You can actually hear the jointer's knives coming in contact with the wood, and differences in sounds are heard as the cutters pass over the surface irregularities. As the wood becomes flatter and truer, the sound becomes more consistent.

So, what do you do when you want a piece of wood wider than 4' or 6'? You edge joint and glue together the widths your jointer can handle to make the width you need. Granted, there may be times when that just won't be acceptable, but more often than not, it will. There are good reasons for doing it this way. One of the best reasons is stability. Generally speaking, the wider and thinner a single piece of wood, the more likely it is to have or develop problems with cupping and warping, especially if your storage and work areas are not climate controlled. Another reason is that it is usually easier to find wood with less defects in narrow widths. (It's also useful for preparing wood for resawing on the band saw, which will be discussed in the next article.)

If you decide a jointer is for you, compare the quality of the different models. Some questions to ask yourself before purchasing one include:

- Is the infeed table perfectly parallel to the outfeed table?
- Does the infeed table move smoothly as it is raised and lowered?
- Is the infeed table stable, and free of any movement when it is not being raised or lowered?

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- Does the fence move smoothly and lock tightly?
- Is the fence tall enough to give good support for edge jointing?
- Is the fence square to both tables along its entire length?
- Is there a vacuum port for collecting shavings?
- What is the voltage and horsepower of the motor? (This is normally not a concern on 4" and 6" jointers, but it should definitely be considered with larger models. A less-than-desirable motor may be included as a way to reduce the overall cost of the machine.)



Push blocks for safely operating the jointer

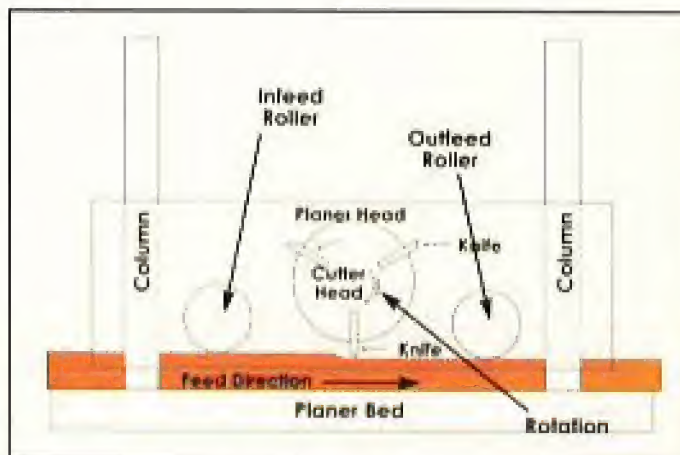
A final item you will want to consider is whether the jointer comes with push blocks for feeding wood across the cutter head. The rubber sole of the push block provides a secure grip, and protects your hands and fingers in case a hidden foreign object or defect in the wood causes the wood to be unexpectedly forced away from the cutter head. If the blocks aren't included, be sure to buy some!

Thickness Planer

Up to this point, I've identified this tool by its full name, "thickness planer," to emphasize its designed use. From this point on, however, I will refer to it by its more common name, which is simply "planer."

A scroller will find that this tool is worth its weight in gold. The only reason it is placed second on my list of most important tools, rather than first, is because the wood needs to be perfectly flat [the jointer's job] in order for the planer to do its job correctly.

[I should mention that you can use a handheld jointer, electric or hand power, to prepare wood for the planer. I didn't mention this in the section on jointers because I believe a stationary jointer is almost foolproof, which is why I can use one! A handheld jointer requires a fair amount of practice in order to use it skillfully. Although the results can be quite good and approach those of what a stationary planer achieves, much more time and effort are involved. If the edge jointing and glue-up method to obtain a wide piece of wood is not an option for a particular project, this is good way to prepare a single, wide-width board for the planer.)



How a planer works

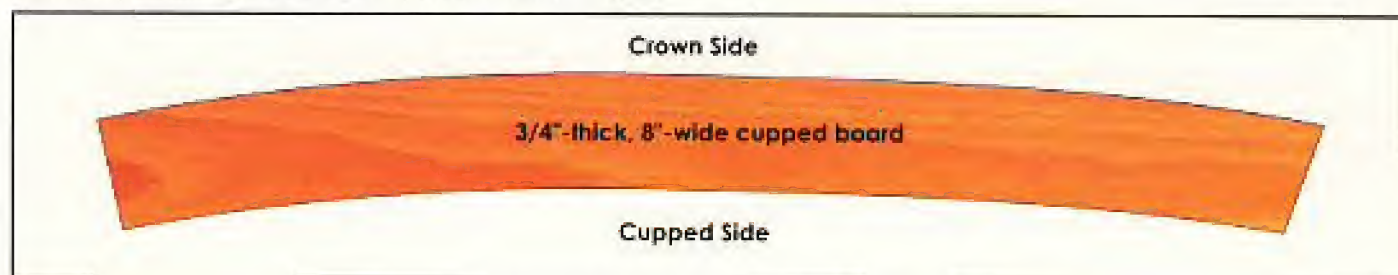
A typical planer basically consists of the planer head, (which contains the cutter head and knives), an infeed roller and an outfeed roller. The planer head is adjusted up or down on columns connected to the planer base to accommodate the thickness of the wood. The wood is pulled into the planer by the infeed roller, slides on top of the planer bed, passes beneath the cutter head, then under the outfeed roller and exits the planer. The planer head is then lowered a small amount, and the wood is passed through it again. The process is repeated until the desired thickness is achieved.

The process sounds simple enough, and not that dissimilar to the jointer I mentioned in the section about jointers that I would explain why a planer, except for cutting the edges, doesn't do the same thing a jointer does. The answer is due to a design difference between the two machines: specifically, the surface the wood slides on relative to the cutter head. The sliding surfaces are also guiding surfaces, and they affect the alignment of the wood with the cutter head. With a jointer, the sliding surface and cutter head are both below the wood. As explained in the jointer section, this enables the jointer to perform its designed purpose of creating a flat, true surface. The sliding surface of a planer is also below the wood, but the cutter head is above the wood. That means both surfaces, top and bottom, are used by the planer to do its job. Irregularities in the bottom surface of the wood could raise, lower or twist the wood as it slides on the planer base and passes under the cutter head. Therefore, the wood needs to be flat and clean on the bottom surface in order for the planer to do its designed purpose, which is to create a flat, uniform thickness the full width and length of the wood.

Because the jointer does its job using just one surface, it can't be asked to do the job of the planer. Turning the wood over after surfacing one side and then surfacing the other side would produce unparallel surfaces. And because the planer uses both sides of the wood to do its job, it can't be asked to do the jointer's job and correct problems with a piece of wood.

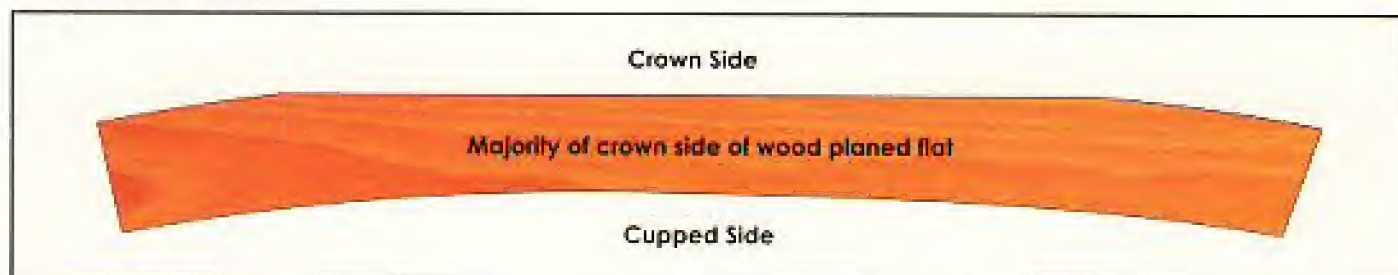
One exception to this rule would be in the case of correcting a cupped piece of wood, provided it isn't bowed and it is thick enough to resist the considerable pressure the infeed and outfeed rollers will apply to it while pulling

the wood through the planer. As the wood travels through the rollers, the pressure will cause most wood to flatten out, at least the wood in thicknesses generally used by scrollers. After exiting the planer, the wood returns to its regular thickness. (Unfortunately, you won't know for sure how thick a piece of wood has to be to resist the pressure until you try it! Factors such as the width and species of wood will play a part.)

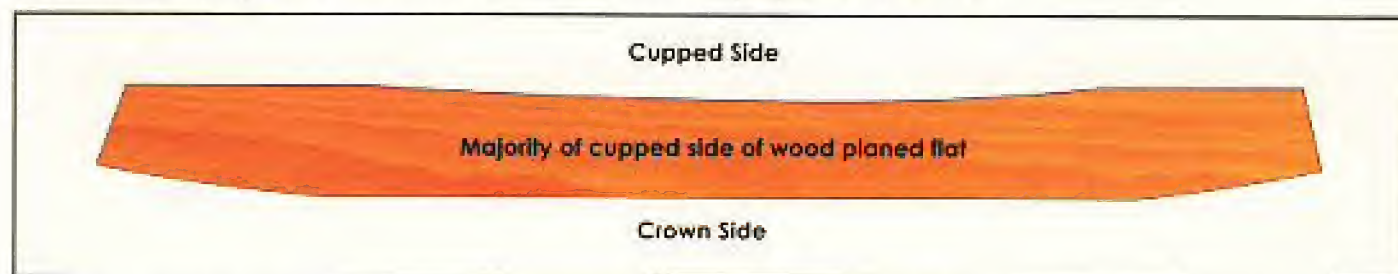


Cupped side of wood on planer bed

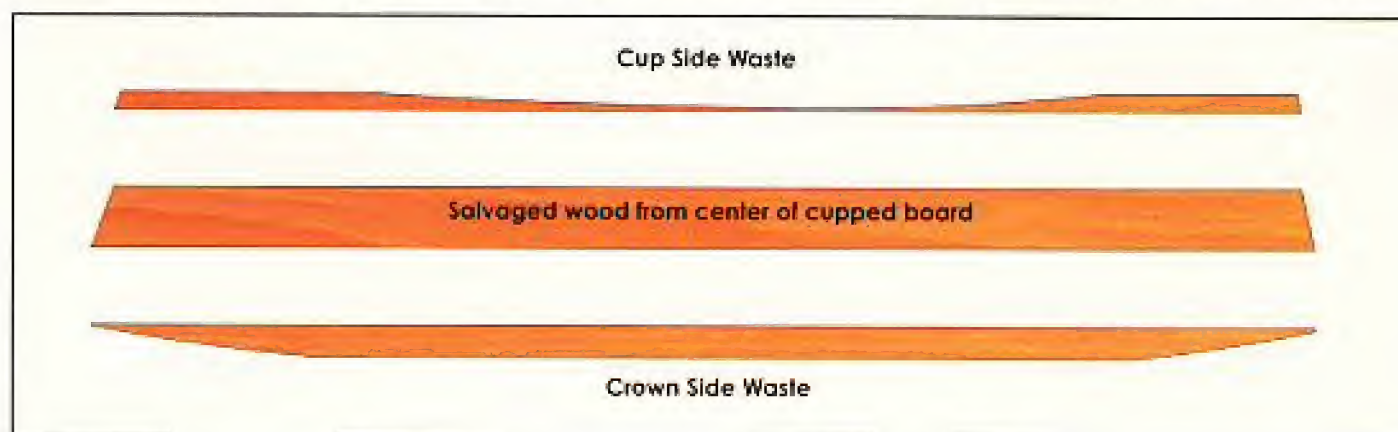
To correct a cupped piece of wood, place the cupped side of the wood on the planer bed. With the power turned off, raise the planer head until the wood will just pass under the infeed roller without touching. With the power still off, lower the planer head until the infeed roller just barely touches the wood. Remove the wood, turn on the power, and pass the wood through the planer.



Make very light, progressive cuts to the crown side until the majority of the width is flat.

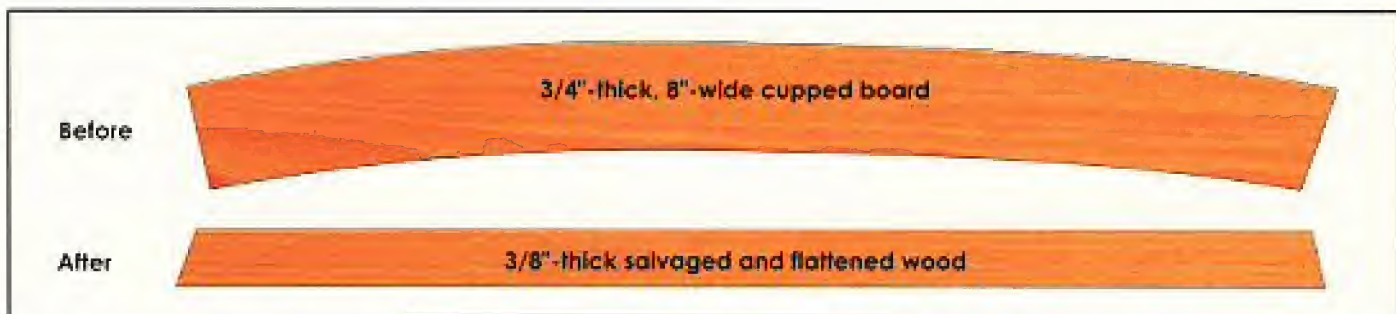


Next, turn the wood over and make very light, progressive cuts to the cupped side, until the majority of that face is flat.



Continue by planing in the normal manner, alternating which face is towards the cutter head on each pass through the planer, until you have removed the remainder of the cup and crown.

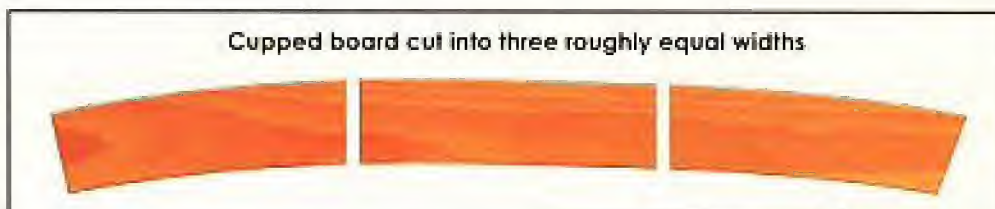
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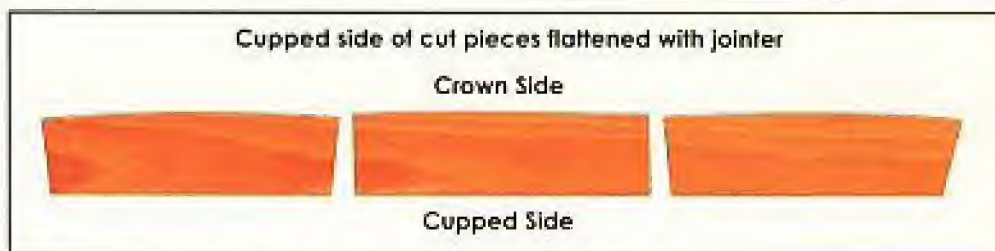
In the illustrated examples, a cupped 8"-wide board has gone from 3/4" thick to 3/8" thick, which is fine if that thickness (or thinner) is acceptable. However, you can salvage more of the thickness by using your scroll saw and a 4" or 6" jointer.

First, use your scroll saw to cut the piece of wood into three roughly equal widths. Although the cuts should be as straight as you can make them, don't worry if they're not perfectly straight because the jointer will correct that.

Next use the jointer to flatten the cupped side of the three pieces. Before the three pieces can be glued back together to regain the 8" width, the angle of the edges needs to be corrected. Using the fence and the jointer, straighten the cuts. After gluing the three pieces back together, flatten the crown side of the wood using the planer.



Cupped board cut into three roughly equal widths



Cupped side of cut pieces flattened with jointer

Crown Side

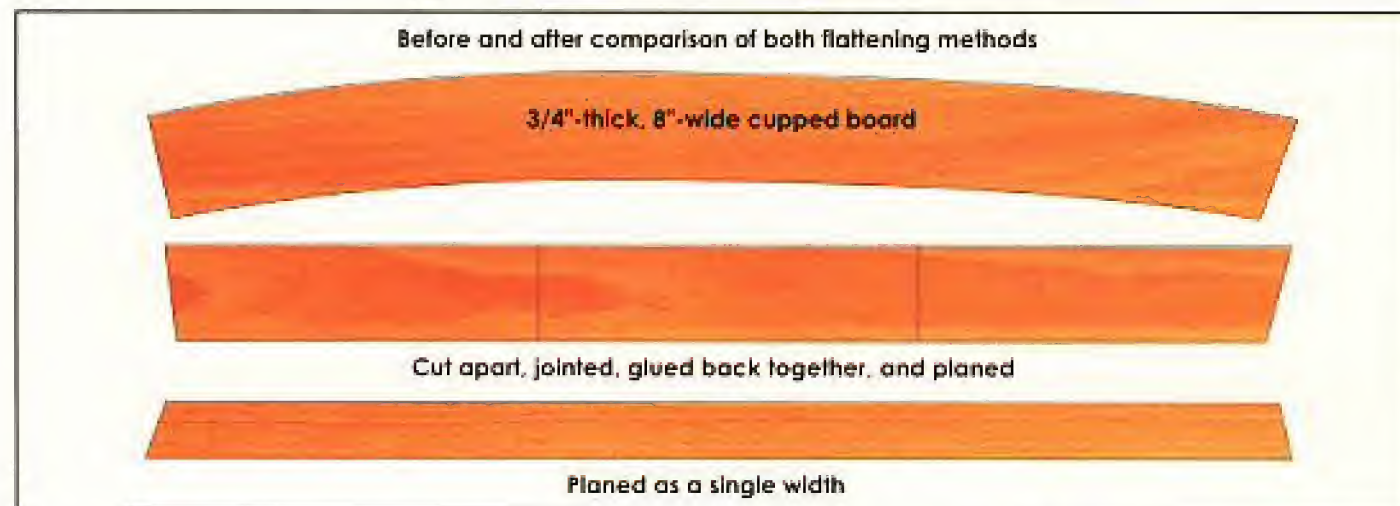
Cupped Side



Cupped side of separated pieces flattened, edges jointed square, and pieces glued back together; crown side ready to be planed to complete the flattening.

Crown Side

Cup Side



Before and after comparison of both flattening methods

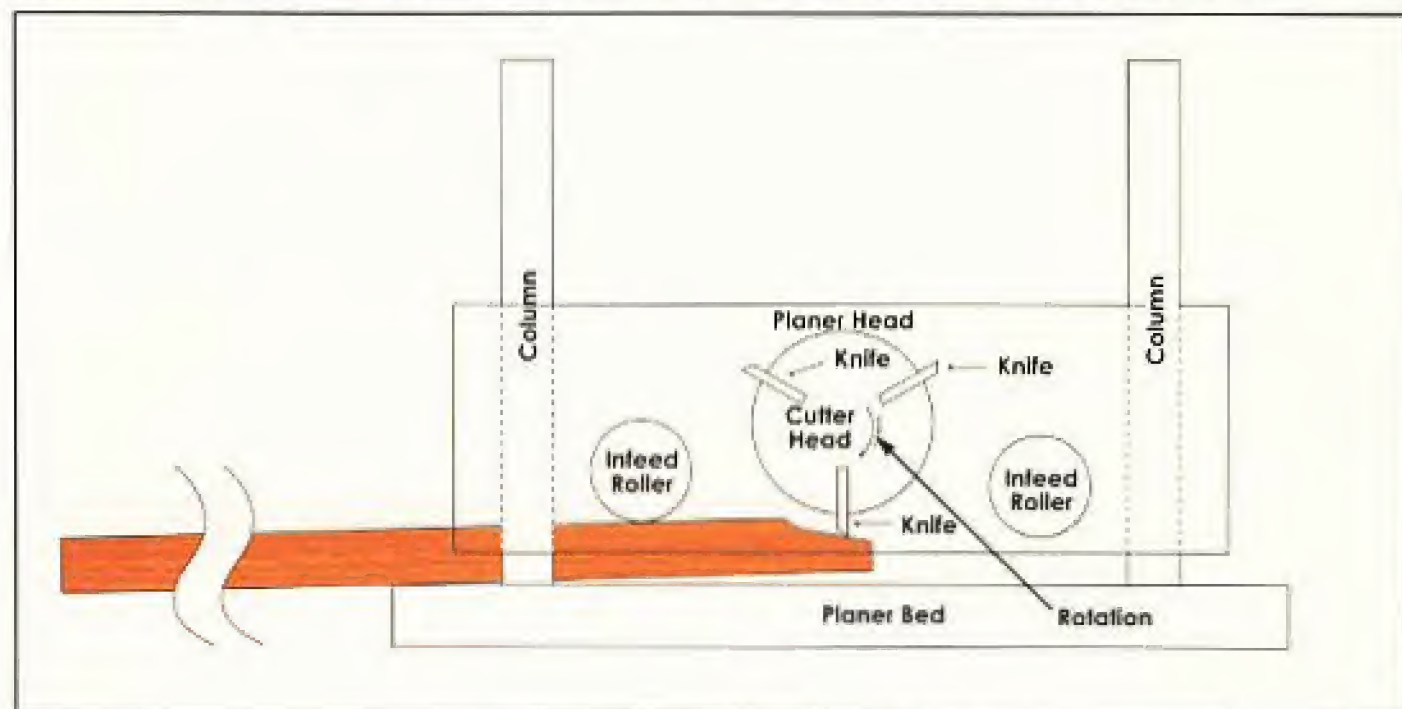
3/4"-thick, 8"-wide cupped board

Cut apart, jointed, glued back together, and planed

Planed as a single width

By first correcting the cup, then flattening the wood, the board only lost a little over 1/16" of its original thickness, instead of the 3/8" lost by planing it in the full 8" width.

When determining the length of wood you want to plane, you will need to be aware of something called "snipe," which is a term used to describe a deeper-than-intended cut that runs for a few inches at the beginning or end of the board as it is planed. Insufficient support of the board's length as it enters and exits the planer can cause this.



Snipe being caused by insufficient support of the wood

When the board is not sufficiently supported, it is not parallel with the planer bed. As the board enters the planer, only the infeed roller is in contact with the wood as it reaches the cutter head. If the far end of the board is lower than the one entering the planer, it will not be in contact with the planer bed. As a result, a deeper-than-intended cut is made in the wood.

When the end of the board passes the cutter head and comes into contact with the outfeed roller, the pressure of both the infeed and outfeed rollers will push it down parallel with the planer bed, and cut the intended depth. As the board is finishing its last few inches through the planer, only the outfeed roller will be in contact with the wood while the cutter head is still cutting, causing the same problem to the other end of the board if it is not correctly supported as it exits the planer. Lifting the opposite end of the board slightly above the planer bed as the board enters or exits will help correct the problem.

Another cause for snipe is due to slack in the height-adjustment assembly of the planer head. An unbalanced torque condition exists when the wood is only in contact with the infeed or outfeed roller, and the planer head can tilt until both rollers are in contact with the wood. The planer heads on many planers these days can be locked to prevent this problem, which is something to keep in mind when selecting one.

Some other things to look for while you're shopping for a planer include:

- How long is the planer bed (both before the infeed roller and after the outfeed roller)?
- Are auxiliary infeed and outfeed tables available to increase support for the wood?
- Does it have an exhaust port for collecting dust and shavings? (Some planers have a built-in vacuum/blower to increase its efficiency of collecting dust and shavings.)

One final item to check is whether the knives are disposable, or if they are the type that can be resharpened. (Some planers allow you the option of using either type.) The time and money required for taking knives to be sharpened or correctly sharpening them yourself should be considered. Disposable knives are often double-sided, which means they can be removed, turned around, and reinstalled; it's like having two sets of knives in one. They're also usually self-adjusting, making them economical and very fast and easy to install.

Well, there is only so much space in one issue that I can talk the publisher into relinquishing for my rambling and babbling, and I've pushed it a bit past that already! I'll pick this subject up again in the upcoming issue with the next tool on my list, the band saw. Until then, keep the sawdust flying!

For questions concerning this article, send a SASE to John at: 3000 Charlston Ct., Waldorf, MD 20602; or email him at: jfetsawyer@verizon.net.



Reader's Gallery



John Rynbrandt of Zeeland, MI has custom made 18 trucks, two of which are shown here. They are mostly poplar. The crane, with its 36" long boom, is modeled after his son's big crane. The only metal on the piece is the bucket chain. John writes that he enjoys working with wood and has a large wood shop, which must come in handy when building pieces this large and detailed!

We are happy to hear you enjoy the magazine, John, and are quite impressed with your creativity!



George North of Chamblee, GA tells us that he seldom receives an issue of *Creative Woodworks & Crafts* without finding "something to whet my appetite for scrolling." This Cornucopia by Annja Starrett, which was featured in our November, 2006 issue, is a "prime example." George acknowledges that it was a challenging piece, but very rewarding. It certainly seems that you were up to the challenge, George! Great work!

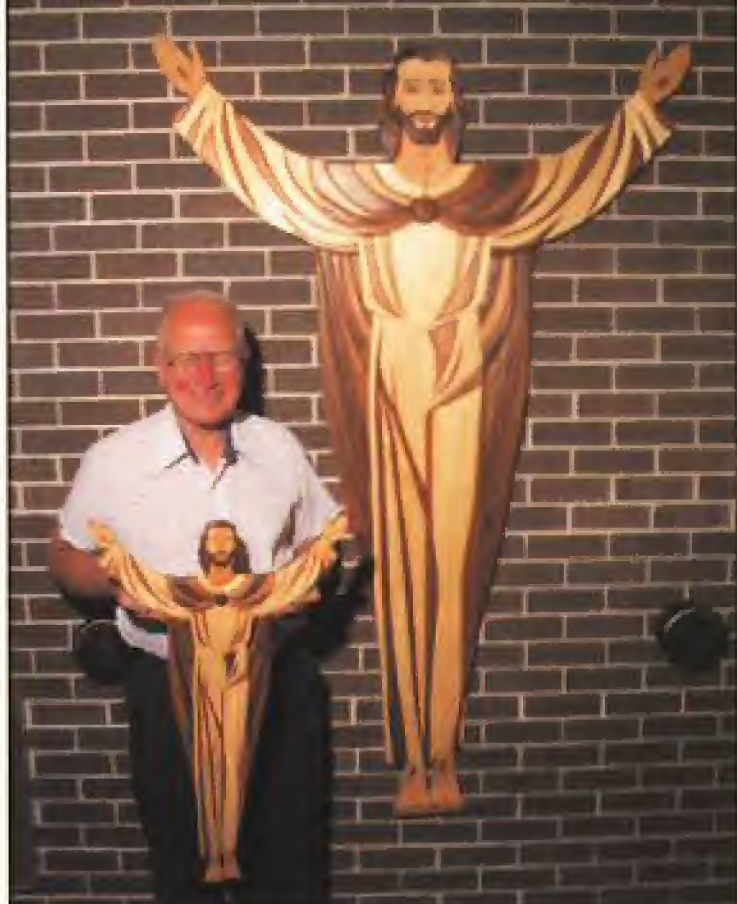


Dan Ort of Brewster, NY has been scrolling for two years. His sister and son are New York City police officers, and to commemorate his sister Diane's 20th year with the force, Dan decided to scroll a picture for her. He purchased the pattern from The Wooden Teddy Bear and set to work. As Dan writes, "I picked my wood, aromatic cedar, sprayed the pattern, drilled the pilot holes. I was set! You know how everyone tells you to start in the middle and work your way out? I did. The silhouette of the female police officer came out great. It was now time to cut stars. After cutting my sixteenth star, I released the blade: the project slipped, and you guessed it, my hand went right through the middle!"



Dan asked his friend Paul at Memphis Hardwood for some advice, and Paul suggested he use a harder wood because cedar can be very fragile. Dan continues, "I didn't give up, I used his advice and used white oak. This time I cut the stars first, and as I cut pieces out of the police officer, I taped them back into place until the project was complete. It came out great! I even impressed myself by putting her name on it." (Note the photo of the beautiful project on the top!)

We loved your story, Dan. We're glad you persevered, and we're sure your sister is, too!



Don Timm of Green Lake, WI shared this photo with us of his two versions of the Jesus intarsia, based on patterns by Scroller. He has been doing intarsia for 7 years and says that the larger piece is the biggest project he has done so far. It stands 6 feet tall, is comprised of 149 pieces of assorted woods, and is finished with tung oil. It is displayed in Grace Church in Berlin, WI. Your workmanship is beautiful, Don!



Harry Savage of Port Jefferson Station, NY sent us this photo of his original cutting, entitled, "Baby Cop." The baby's father is a Sergeant with the NYPD. What a memorable piece, Harry!

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Reader's Gallery

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Fred Hornby of Appleton, WI started scrolling projects from Pat Spielman's Puzzle Book and other basic designs when he retired. After gaining some confidence in his woodworking skills, he scrolled four sets of the wall mirror with sconces—one set for each of his four children and their spouses. (The mirror and sconces are Berry Basket patterns.)

Fred and his wife have five grandsons and one step-grandson. Each will receive a scrolled copy of Moses and the Ten Commandments by Wildwood Designs for a wedding gift. (Three are already married and have received theirs; two more weddings are planned for this year.) Fred and his wife also have eight granddaughters and one step-granddaughter. Each of the girls will receive a scrolled copy of the 23rd Psalm (not shown) for their wedding gift. Five of the granddaughters are already married and have received their gifts, and one more wedding is planned for this year. (Fred has actually already completed all 15 cullings, and he says that even if he doesn't live to see all the grandchildren married, his son will present their gifts to them.)

The first-born great-grandchild to each family receives a large toy box, with an interior drawer to hold smaller toys. The alphabet, numbers, and clown patterns are from Pat Spielman designs. So far, seven have been made.

The second-born great-grandchild in each family (three so far) receives a rocking horse based on an Armor Crafts pattern, and the third-born great-grandchild (one so far!), receives the doggie riding scooter based on a Meisel Hardware Specialties pattern. Two first-borns are on the way, so two more toy boxes are in the works.

Fred graciously offered to "do the math" for us: four children, fifteen grandchildren, eleven great-grandchildren, and one wife who "receives a trivet every couple of years!" He adds that their family Christmas dinner, which is held





Homer and Carol Bishop of Streator, IL designed this 160-piece eagle pattern that measures 15" x 36". Eagles have been very popular items at the shows they attend, so after making almost all of the ones they could find patterns for, they resorted to designing their own! Nice job, Homer and Carol!



Marvin Eisenschien

of Blaine, MN got into this intarsia type of woodworking last year, after reading a *Creative Woodworks & Crafts* magazine. He has been designing tooling for 45 years, and has taken up art, painting, and woodworking throughout his life. Most of his creative endeavors are simply for leisure and relaxation. Marvin designs all his own pieces, such as this crappie.

Made from oak, walnut, and maple, the crappie measures 4" x 8-1/2". Most of Marvin's designs focus on integrating his pieces with nature.

We are very happy that you chose to share your work with us, Marvin. Your work is beautiful!



in early January so as not to interfere with the individual family celebrations, will "be blessed" with 41 family members, plus girlfriends and boyfriends.

Fred so eloquently writes, "Some of these gifts will be discarded, some sold at flea markets and rummage sales, but my wife and I hope some will become heirlooms passed down for at least a couple of generations so someone will ask, "Who was this Great-Grandfather Hornby, and does anyone have a picture of him?"

The value of these gifts far exceeds any monetary amount you could place on them, Fred. It is clear that you and your wife have instilled that great sense of "family" in your own children, and it seems unlikely that their descendants will have to ask "Who was Great-Grandfather Hornby?" Thank you for sharing your heartwarming story with us,

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Reader's Gallery

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Joe Juhasz of Mesa, AZ became interested in intarsia after reading about it in the magazine and on the internet. Although he has only been doing intarsia for six months, he has already made this Rifleman by Garnet Hall. Joe gave it his own touches by adding a beard, a real belt with a badge for the shoulder strap, buckles on the saddle bags, and a belt buckle.

Joe claims that his "shop equipment is very modest," and that he's "short on experience." It's hard to believe with workmanship like this. Joe! We're glad you are enjoying your new hobby so much.



Robert Butler of Fort Laramie, WY sent these pictures of various projects he has made. He writes that, "What started out as merely a way to make Christmas gifts for friends and family 8 years ago has led me to designing my own projects." The tiger on the right is based on an old poster of his mother's that she had filed away in her writing desk for "umpteens" years. He decided it would make a nice subject for a woodworking project, so he drew up a pattern and presented the scrolled plaque to her for her 98th birthday.

The snow leopard and tiger cubs cutting is based on a computer screen-saver photo. Both the cubs and the tiger pieces were cut from Siberian Elm, which Robert finds to be a great wood choice because of its durability, ease of sawing, and its truly rich colors after finish is applied to it. All the wood came from his property in southeast Wyoming, and Robert and his wife, Linda, turned it into lumber themselves. They have a custom built band saw capable of sawing through 18" wide x 4' long tree trunks, so "making boards from these old dead trees is a snap."

Also pictured are John Wayne and Buffalo Bill portraits by Gary Browning, and the Nashua Clock by John Nelson. The clock is made from Bubinga wood that a friend of Robert's found at the Jackson Hole landfill in Jackson, Wyoming. Robert was able to resaw a half dozen scrap pieces of 7/8"-thick boards, and make them into this particularly challenging project. He even designed a working pendulum out of the last remaining pieces.

Robert writes, "I guess you could say I'm hooked on scroll sawing. It has been a most rewarding hobby and lately, a profitable one, as well." We are happy to hear that scrolling has been such a fulfilling pastime for you, Robert. Your work is great!

Attention readers!

We invite you to send us photos of your work, whether original or not, to be included in our Reader's Gallery feature. If it is not of your own design, please tell us whose design it is and, if possible, add a few sentences about the piece(s) being shown. Good, clear, flat photos (or slides) are desirable. Please do NOT send the item itself. Send to Creative Woodworks & Crafts, 7 Waterloo Road, Stanhope, NJ 07874, Attn: Robert Becker. Please include your mailing address, and feel free to include a photo of yourself! Digital photographs are also acceptable with a resolution of 300 dpi, at approximately 3" x 4", preferably in jpeg or tiff format. They may be emailed to editors@woodworksandcrafts.com.



Yellow Lab Puppy

by Annja Starrett



Introduction

I usually divide an intarsia project into several "groups." I cut and fit the pieces within a group, while leaving a border around the outside edge. I fit two groups together, then continue by adding the third one, the fourth, and so on. This method works well for this puppy pattern because only a few groups need to be fit to each other. I grouped the pieces as follows: Group 1—upper head; Group 2—snout; Group 3—jaw and tongue; Group 4—left side of chest; Group 5—right side of chest; Group 6—ears; and Group 7—legs and tail.

INSTRUCTIONS

Step 1. Make several photocopies of the pattern, saving the original for future use. Cut the pattern pieces apart. As an aid for laying out the pattern on the wood, also trace the pattern onto tracing paper. Place the traced copy on top of the wood, and slide it around until you find a grain configuration to your liking. Slide the matching paper copy underneath the traced copy, and hold it in place while removing the tracing paper. Mark several small dots to indicate the outline of the pattern piece, which will be useful when reattaching the pattern in the correct spot.

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SUPPLIES

Wood: 3/4"-thick pieces (unless otherwise noted on pattern) in the following species*: maple (for all light-colored body parts), birch (for all dark-colored body parts), bloodwood (for tongue), aspen (for edges on ears), light walnut (for jaw), dark walnut (for jaw, inner paw, and part of rear leg), basswood (for snout), cherry (for nose overlay), butternut scraps (for eyes); plywood—one piece 1/4" x 14" x 16" (for backer), 1/4"-thick and 1/8"-thick pieces (for spacers); 1/8"-thick maple pieces (for front paw spacers)

Tools: scroll saw with No. 7 and No. 2/0 blades; drill with 1/8" bit; band saw (optional)

Temporary-bond spray adhesive

Tracing paper

Clear packing tape

Sandpaper, 80-200 grit

Wood glue

Red 0.5mm marker

1/8"-diameter dowel

Black paint

Glossy lacquer

Finish of choice

Hanger

Leaves (optional)

*Amounts required for each type of wood will be determined by the grain configuration.

pieces on top of the tape. (The tape helps lubricate the blades and makes pattern removal easier.) Cut larger boards into more manageable-size pieces, preferably using a bandsaw.



Step 3. Cut the left and right side of the upper head. Lay the pieces on top of the forehead, and redraw the lines if necessary. (Using a red pen greatly increases visibility.) After cutting the three pieces, tape them together.



Step 2. Adhere a layer of clear packing tape to the wood. Using temporary-bond spray adhesive, attach the pattern



Step 4. Cut the snout area, and fit it to the head.



Step 5. Cut out the ears and the teardrop-shaped markings above the eyes. Use a No. 2/0 blade to cut the nose overlay from 1/8"-thick cherry. To achieve the illusion of depth, refer to the dashed line on the nose underlay pattern to cut a piece from walnut, which will be inlaid into the snout.



Step 6. Cut the lower jaw and tongue. (Notice that I did not leave an outer border on this group of segments because it is the "master group," or the group of pieces to which the following sections get joined. I also peeled off the patterns from these pieces because they will not be needed any more.) Also cut and fit the pieces for the left side of the chest, then the pieces for the right side.



Step 7. Fit the left side of the chest to the right side. Lay the jaw/tongue on top, and redraw the cut line. After cutting, tape the three groups together. In the same manner, lay the assembly on top of the head, redraw the pattern line, and fit the upper head to the body.



Step 8. The eyes are the focal point of a project and deserve special attention. They consist of small pieces which are hard to work with, but the end result is well worth the effort. To create the highlight in the eye, first drill a 1/8" diameter hole into the 3/4"-thick butternut.

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Step 9. Cut the eyeball just beyond the traced line, leaving the three parts of the eye connected.



Step 10. Cut the perimeter of the eye. (Use a zero-clearance insert when cutting to insure a safe and vibration-free cut. Another option is to tape a piece of plywood over the hole in the table). Cut and fit the lower and upper eyelid pieces.



Step 11. Fit the ears to the head. Insert the nose underlay and the markings above the eyes. (If the nose underlay is

too small for the hole, simply cut it in half so it fills the sections at each side of the oval area. A tight joint is only necessary where the underlay will be visible.)



Step 12. Cut and fit the front legs.



Step 13. Finish the cutting process by adding the rear legs and tail.



Step 14. Raise the eyes $1/16"$. Place the outer part of the snout on a $1/8"$ -thick spacer, and the center part of the snout on a $1/4"$ -thick spacer. Additionally, place the head on a $1/4"$ -thick spacer, as indicated by the shaded area on the pattern. [Note in this photo that both the tongue and lower jaw are also raised with the spacer used for the head. I later decided that I didn't want the jaw to be raised, so I changed the spacer accordingly. I also recut the spacer below the ears so it wouldn't be visible.] If you cut the front paws from $3/4"$ -thick material, raise them using $1/8"$ -thick maple spacers.



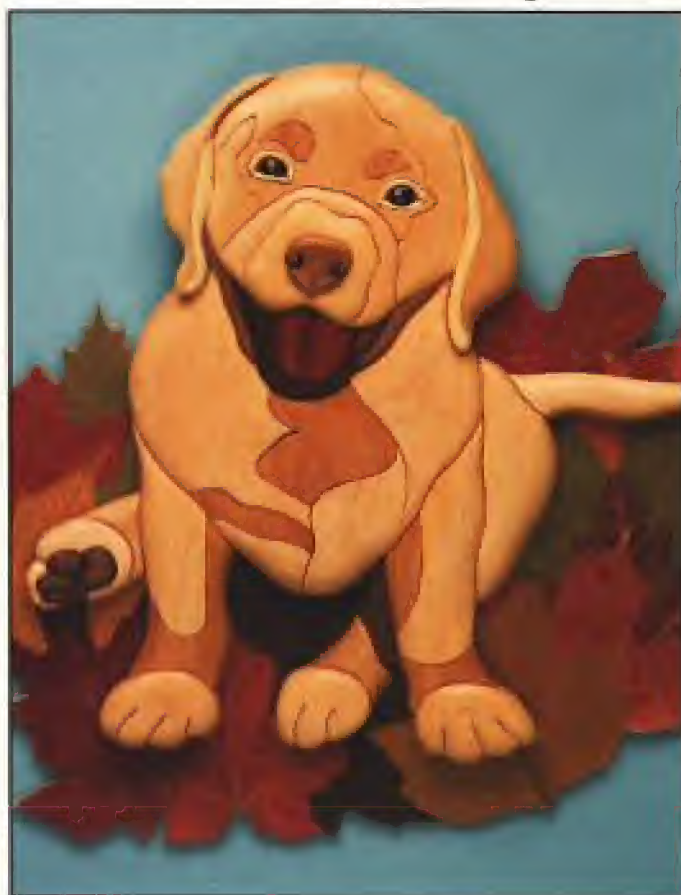
Step 15. Shape the head in approximately a $1/2"$ radius from the left cheek over the top to the right cheek, and approximately a $1/4"$ radius from the right cheek going past the nose toward the left. Gradually slope the two snout pieces towards the main part of the head. Round over the outer edges of the ears significantly, but only slightly round the inside edges of the ears. Round the outer edge of the tongue $1/4"$, and sand the tongue down toward the center crevice. Because the lower jaw and the chest are cut from material of the same thickness, it is necessary to shape down the chest to create the impression of the jaw protruding from the body. As with the snout, try to avoid a "step-down" look by gradually shaping the pieces down.

Step 16. Contour the legs and tail. Sand all the pieces of the puppy, using first 80-grit sandpaper, and graduating to 200-grit.

Step 17. Paint the pupil of the eye black. When the paint is dry, insert a piece of $1/8"$ -diameter dowel into the drilled hole to create a highlight. Apply glossy lacquer to the eyeball. For a wet appearance, also apply glossy lacquer to the tongue and nose.

Step 18. Trace the perimeter of the entire pattern onto the plywood for the backer. You may either edge glue the pieces of the puppy together and screw it to the backer, or glue all the pieces of the puppy to the backer. I had originally planned to apply a dark stain to the visible area of the backer around the puppy to create shadows, and I still think this would be an attractive finishing treatment for the piece. However, I remembered I had a bunch of colorful leaves I had collected and pressed last fall, and I had been looking for a good use for them. I decided to apply the leaves to the plywood to create a colorful finishing touch. However, I have never used this process before and cannot vouch for how well it will hold up with time. I simply attached the leaves to the backer using acid-free glue gel, which is the type used for scrapbooking. After the glue dried, I applied a coat of clear Krylon matte finish to the project, which is a protective finish often used for pencil and charcoal drawings. If you don't feel like experimenting with the leaves, a stained plywood backer will serve well.

For questions concerning this project, send a SASE to Anna Stewart, 18 Summit St., Defiance, OH 43512.





Chimp Intarsia

by Darin Liles

SUPPLIES

Wood: yellowheart—one piece 3/4" x 12" x 20" (for large leaves); poplar—one piece 3/4" x 6" x 20" (for small leaves); one piece 1/2" x 6" x 12" (for veins in large leaves); walnut—one piece 3/4" x 12" x 20" (for chimp); burr oak—one piece 3/4" x 6" x 15" (for ear and face); mahogany—one piece 3/4" x 6" x 7" (for snout); plywood—one piece 1/4" x 20" x 20" (for backer)

Tools: scroll saw with No. 3 Flying Dutchman blades; oscillating spindle sander with assorted-grits sandpaper; mop wheel

Tracing paper

Carbon paper

Sharp pencil

Wood glue

Minwax natural stain

Clear finish of choice

Hanger of choice

INSTRUCTIONS

Step 1. Trace the large leaves onto tracing paper. Position the traced pattern on the 3/4"-thick yellowheart, paying close attention to the grain configuration. Use carbon paper to transfer the pattern to the wood. Cut out all the leaf sections. Use 1/2"-thick poplar for the veins, and raise them 1/4". Round and sand all pieces. When you are satisfied with the fit, glue all the leaf pieces together, and set aside. These large leaves will form the base layer of the project.



Step 2. Cut the large section of the chimp's head, then cut and fit the ear to the head.



Step 3. Cut and fit the lower part of the head to the upper area already cut.





continued on page 78



Step 4. Cut and fit the shoulder and cheek. Raise these pieces $1/4"$. Also raise the outer part of the ear $1/4"$.



Step 5. Cut the eye and eyebrow pieces. Raise the eyebrow $1/4"$.



Step 6. Cut and fit the pieces for the jaw, mouth, nose, and lower part of the face. Raise the nose $1/4"$. Round all pieces of the chimp, check for fit, and glue together. Let the glue dry.



Step 7. Referring to the assembly diagram and photograph for placement, position the chimp's head on top of the large leaves, and glue in place. Set aside until dry.



Step 8. Cut the left and right small leaves from $3/4"$ -thick poplar. Cut the veins from $1/2"$ -thick yellowheart. Round the leaf pieces, check for fit, and glue together.



Step 9. In the same manner, cut and fit the pieces for the small center leaf. When the glue is dry, position the center leaf on top of the left and right leaves, and glue in place. Let dry.



Step 10. Position the small leaves on top of the chimp, referring to the assembly diagram and photograph for placement, and glue in place.



Step 11. Place the finished piece on top of the plywood, trace around the perimeter, and remove the piece. Cutting just to the inside of the traced line, cut out the backer at a 45° angle. Test fit the finished piece to the backer. When satisfied with the fit, glue the backer in place, and let dry. Apply a natural stain to the entire piece, let dry, then apply your clear finish of choice. When dry, attach a hanger to the center back of the piece, and display.

For questions concerning this project, please send a SASE to: Darr Liles, 252 Sam Street, Shirley, AR 72153.



Assembly Diagram



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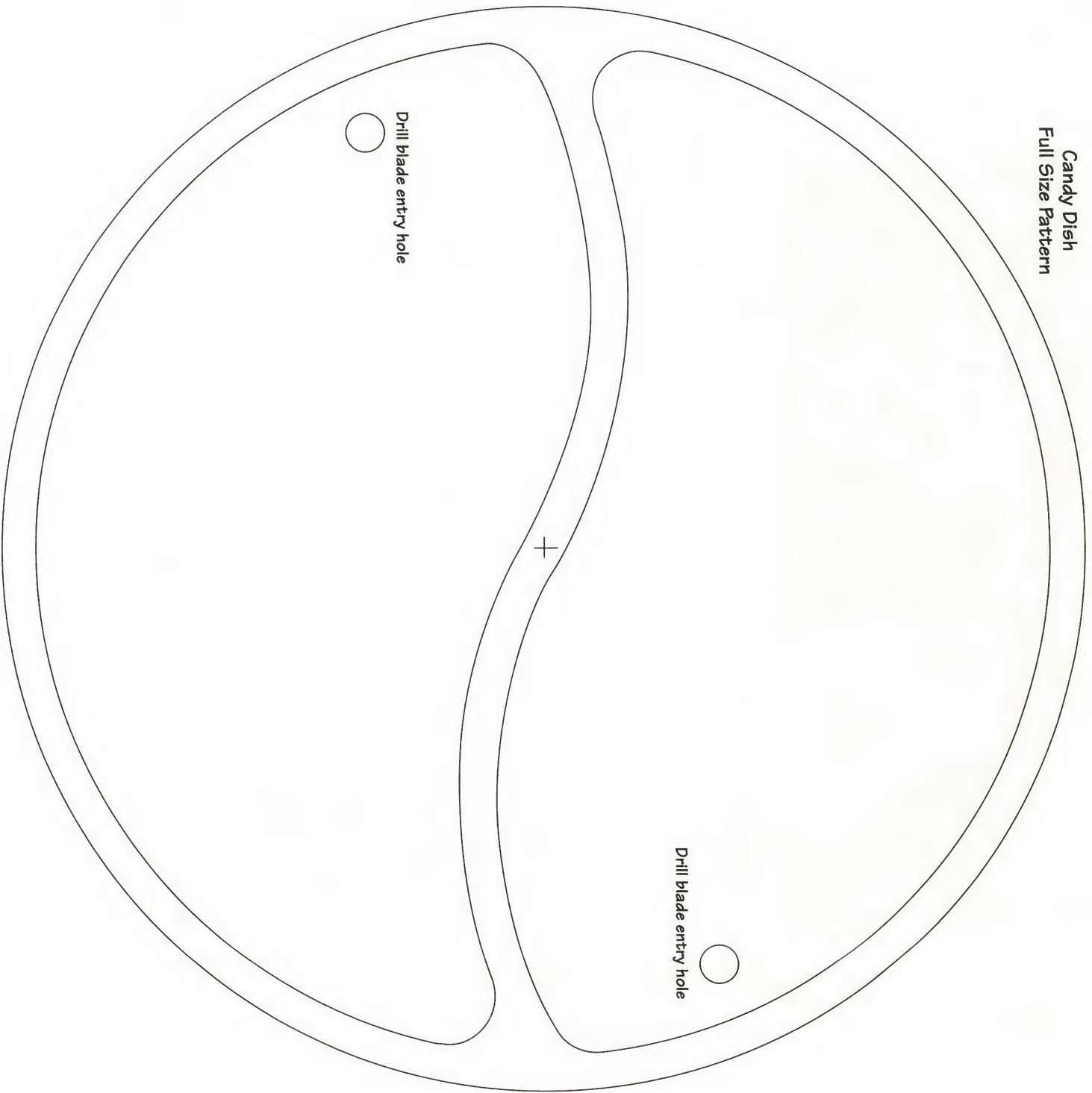
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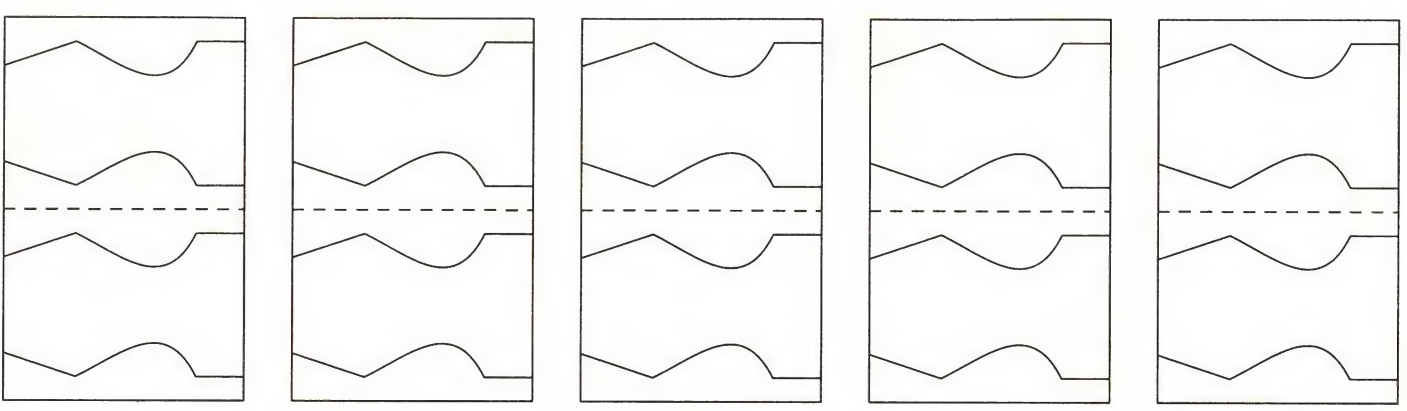
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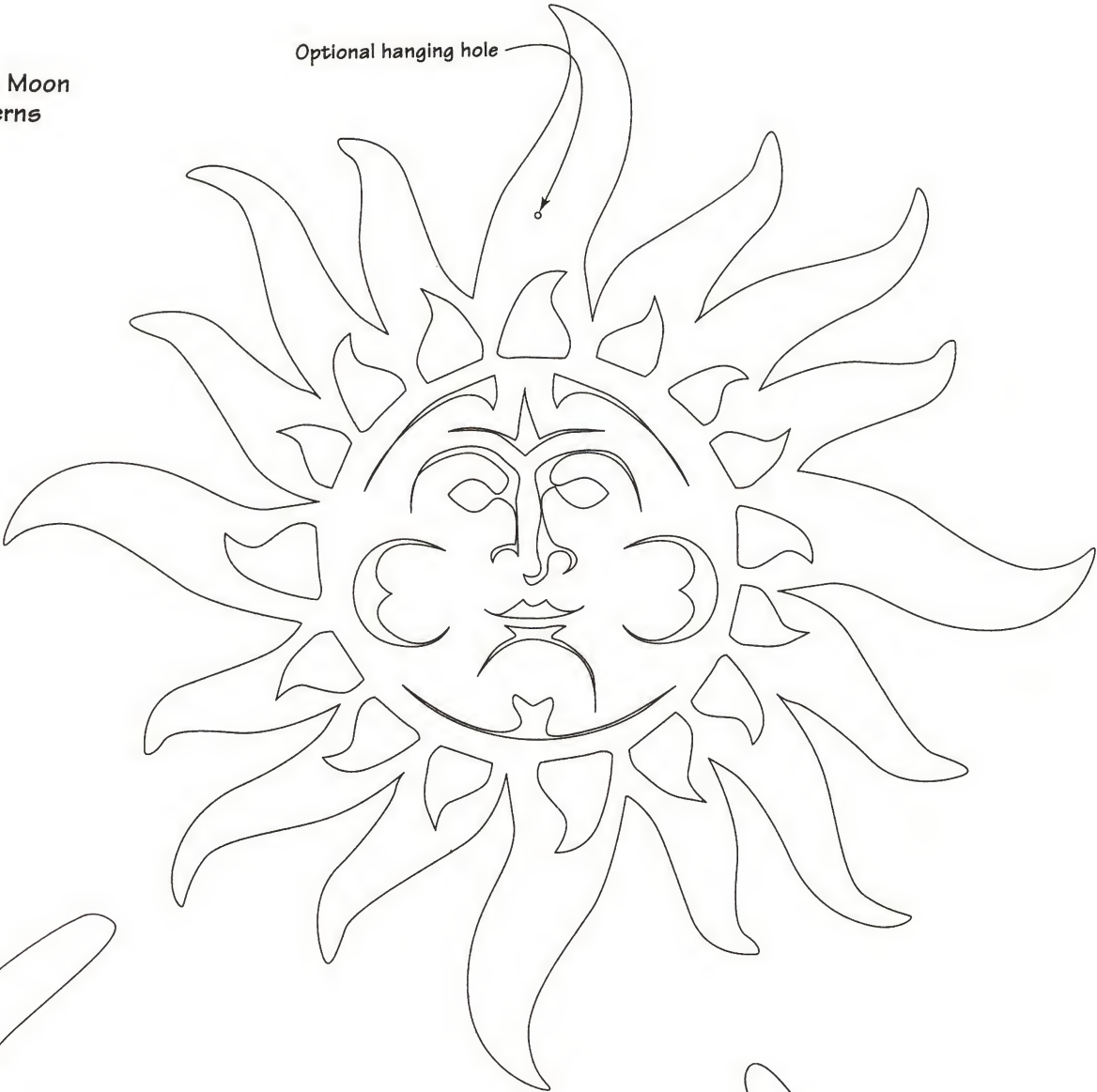


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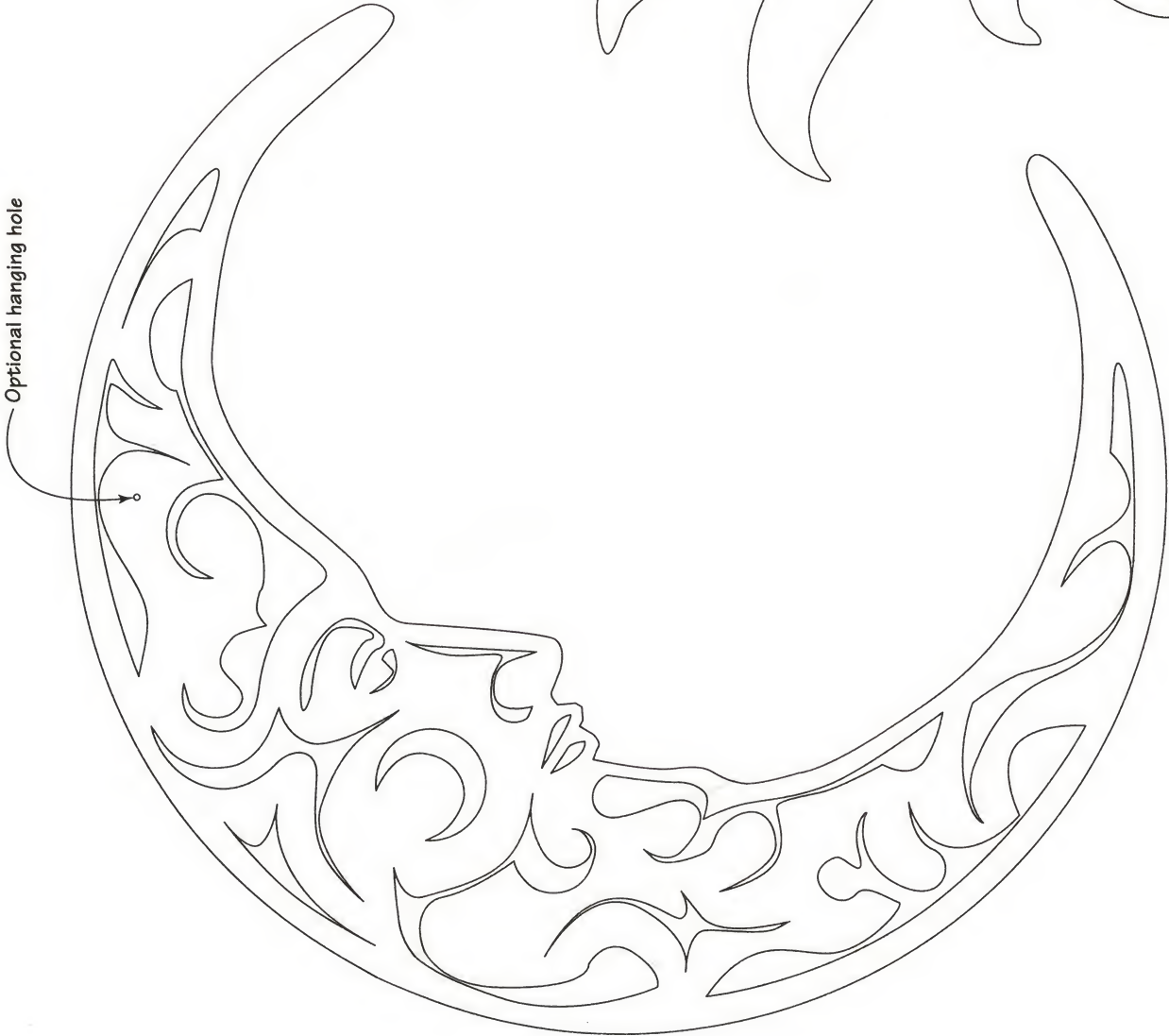


The Sun and the Moon
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Optional hanging hole

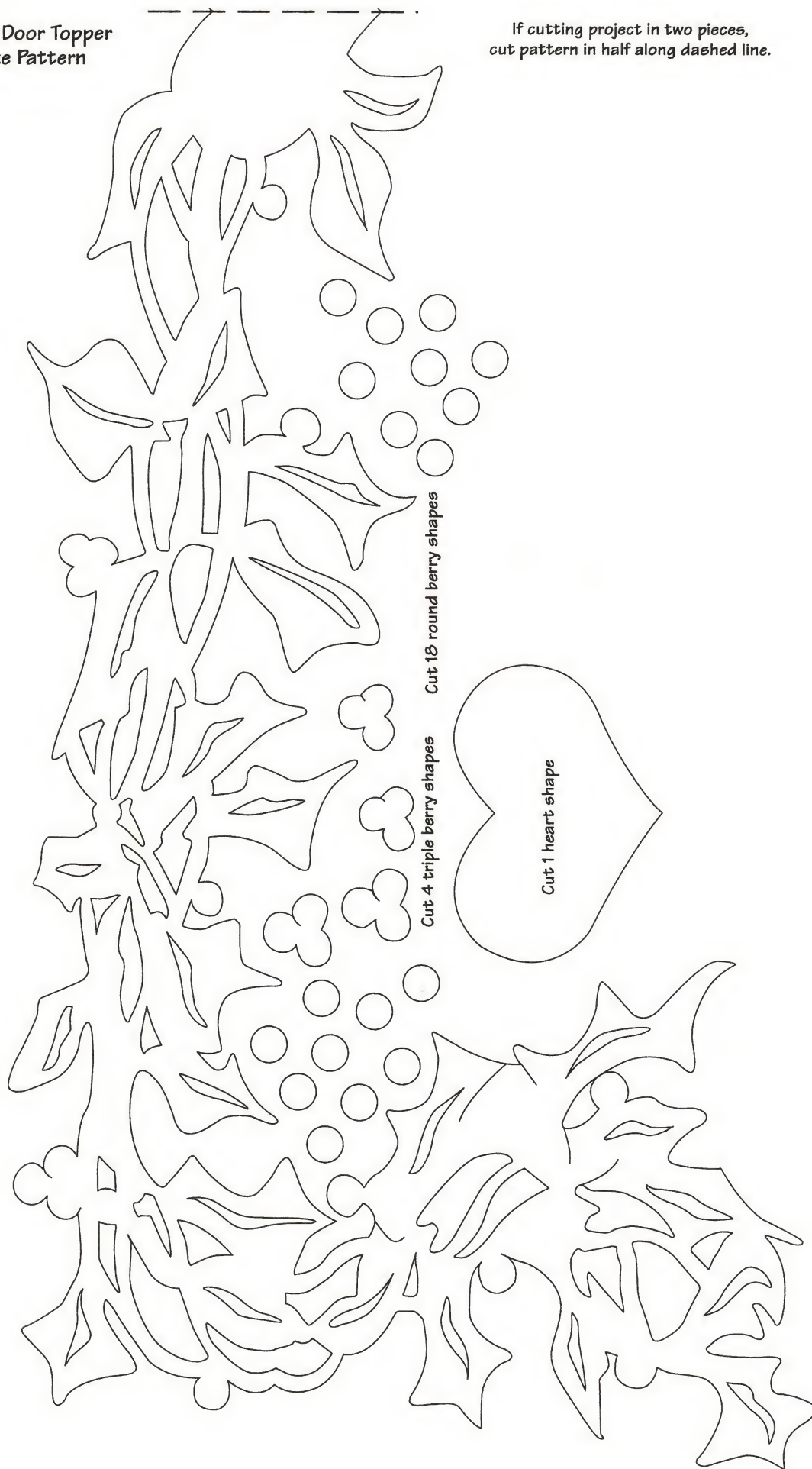


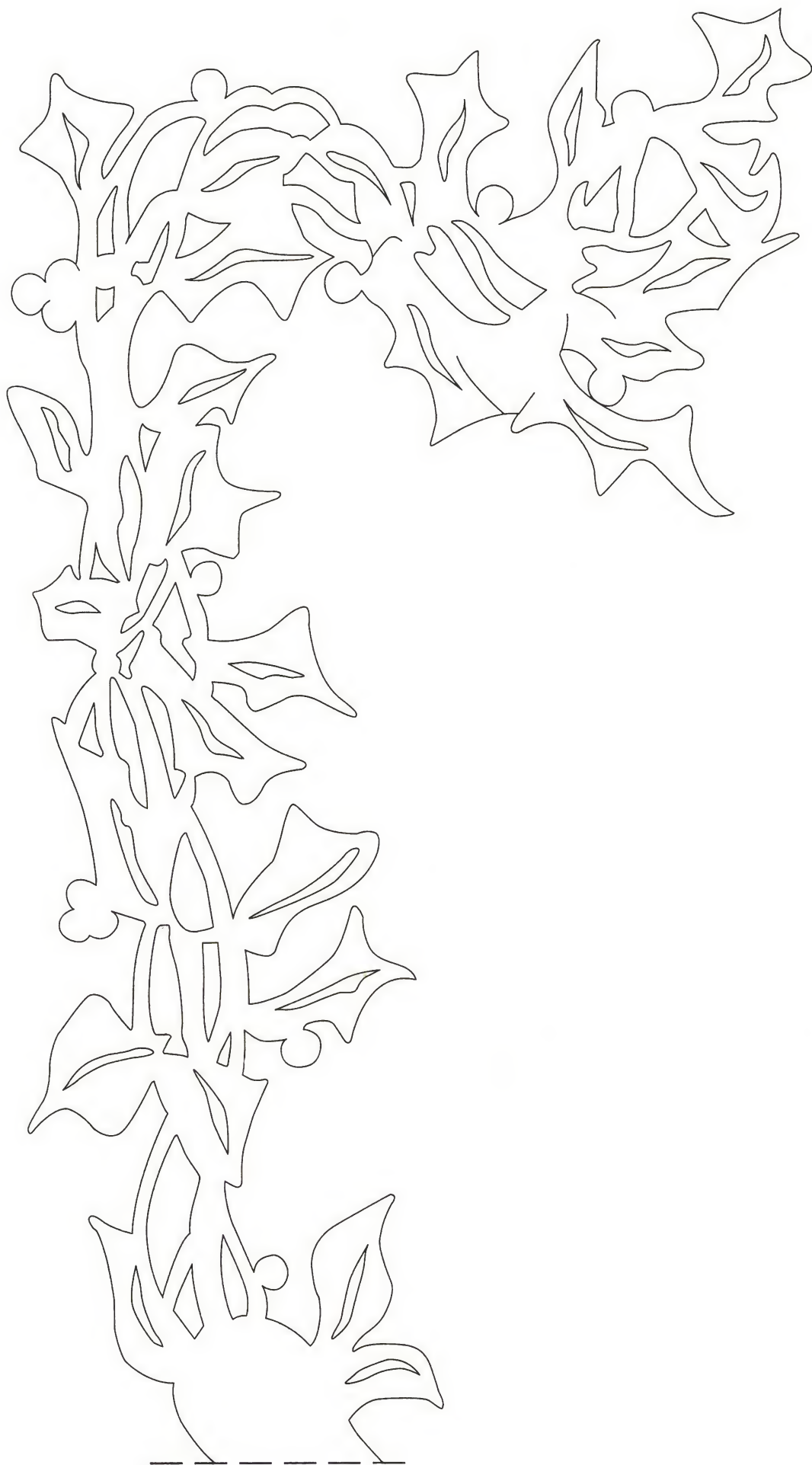
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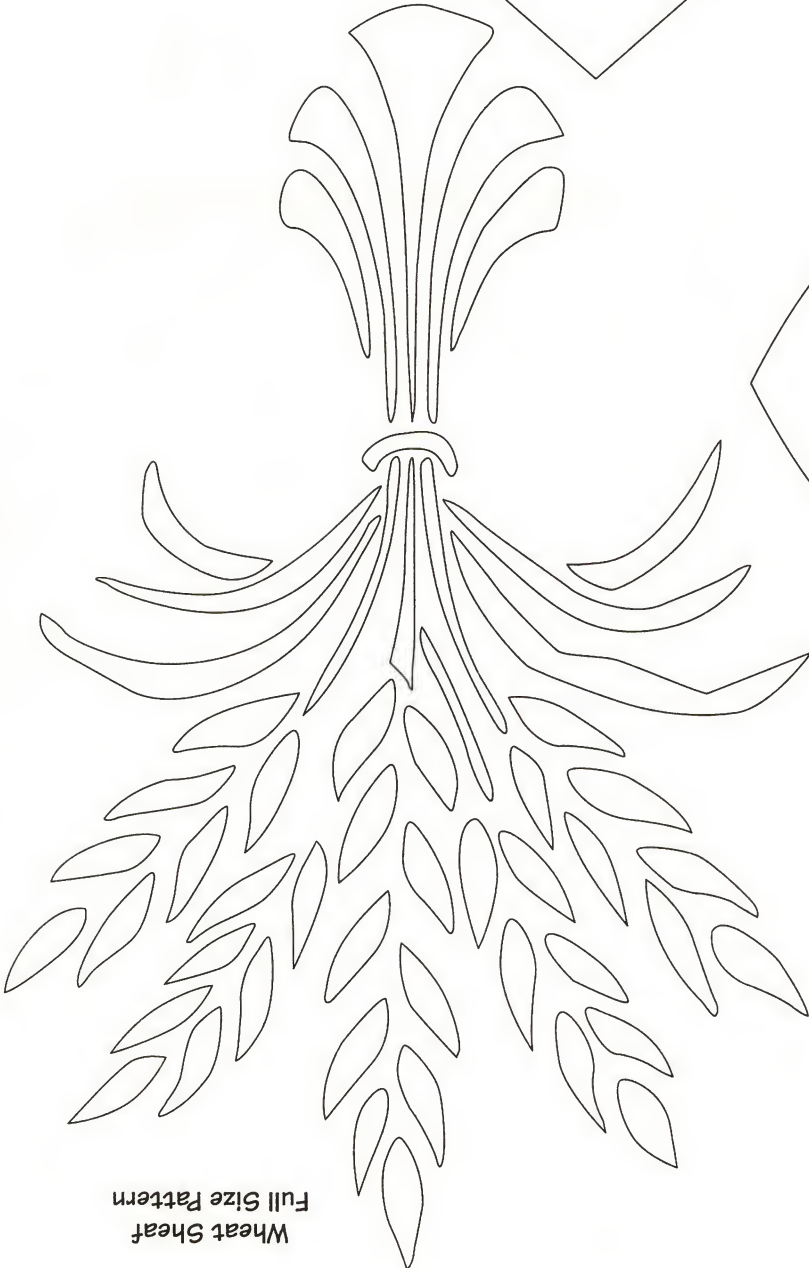
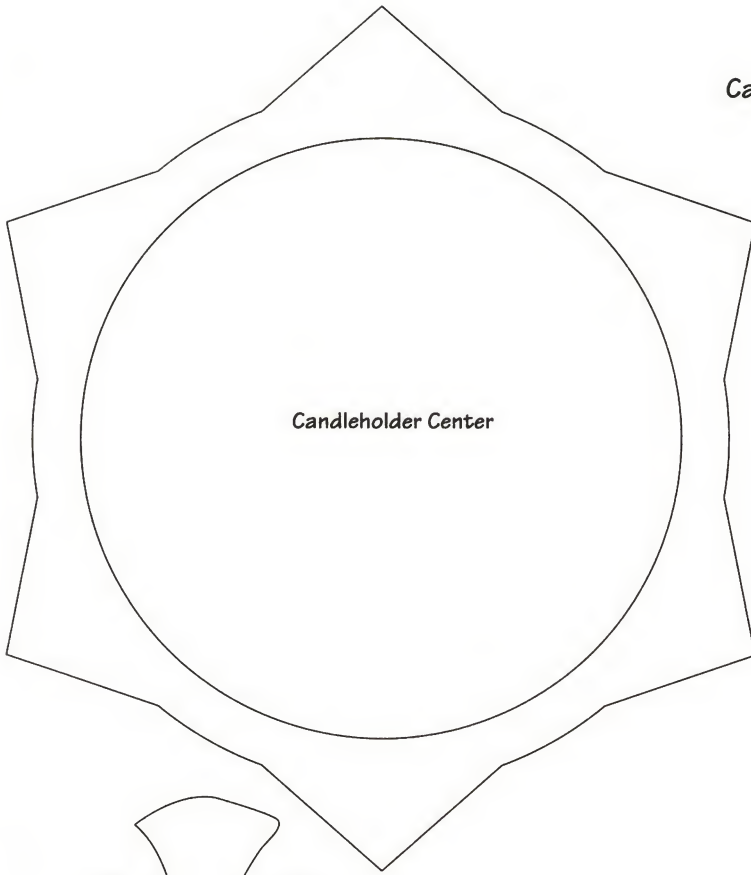
Seasonal Door Topper
Full Size Pattern

If cutting project in two pieces,
cut pattern in half along dashed line.

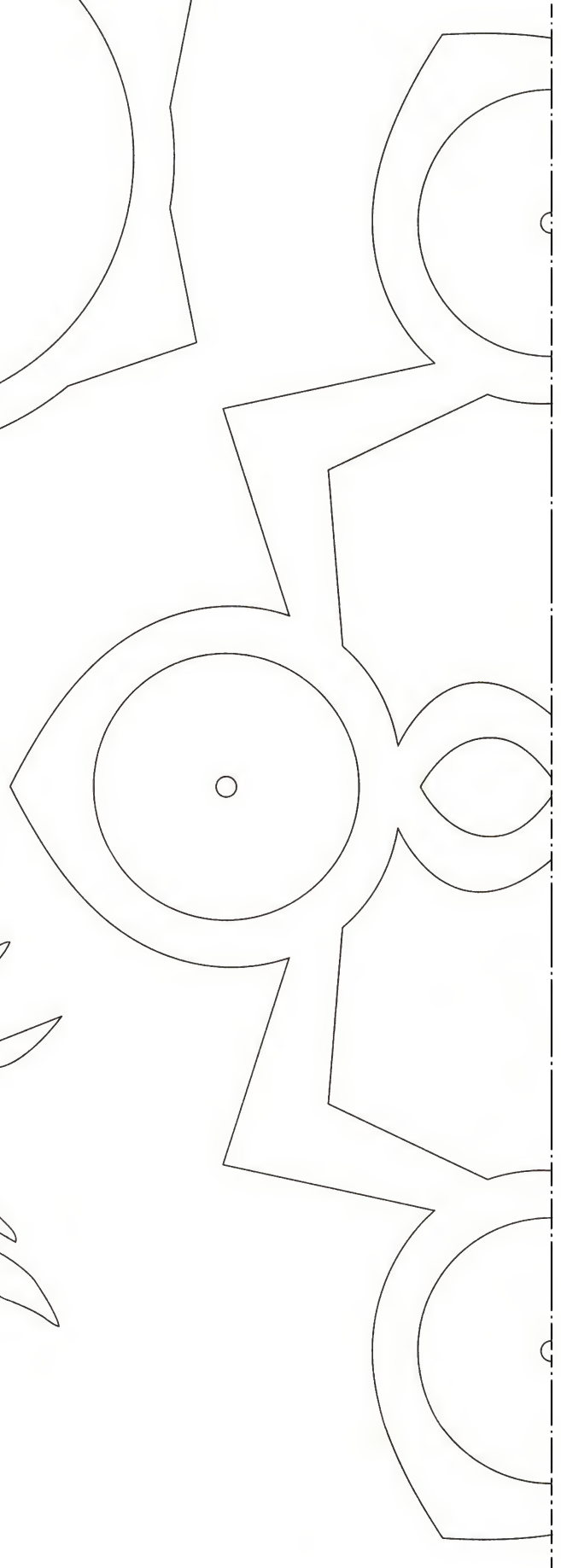




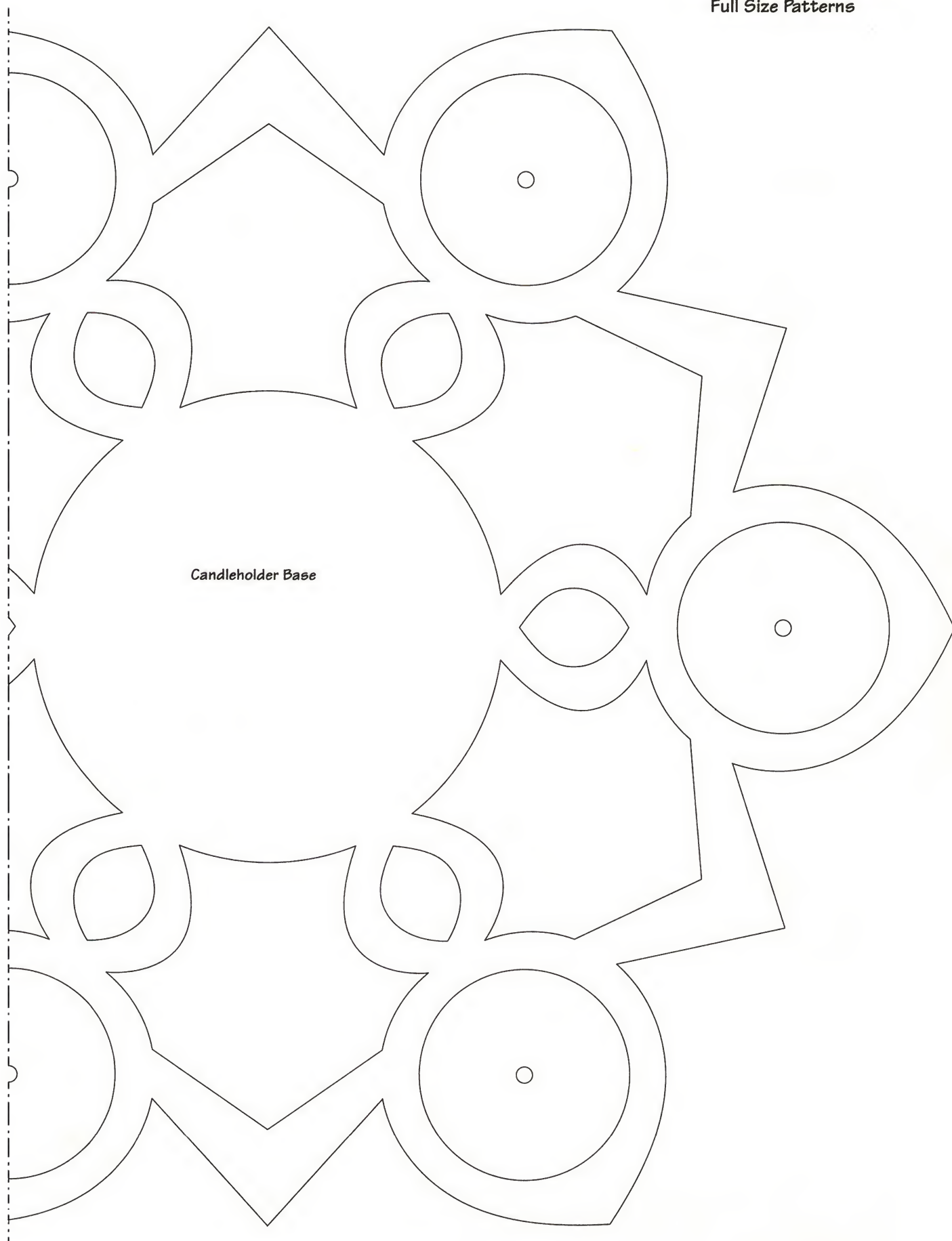
Candleholder Centerpiece
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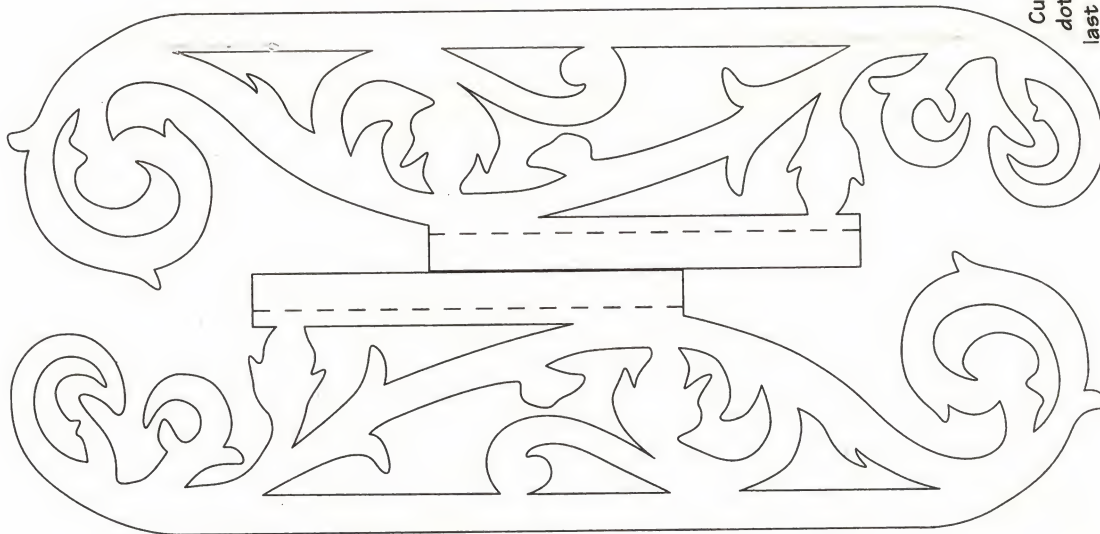
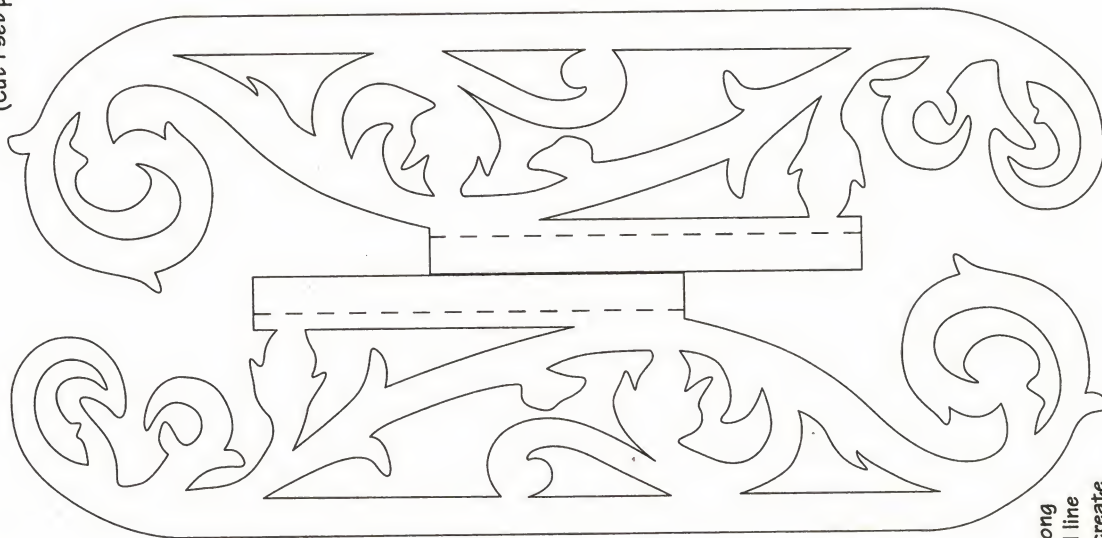
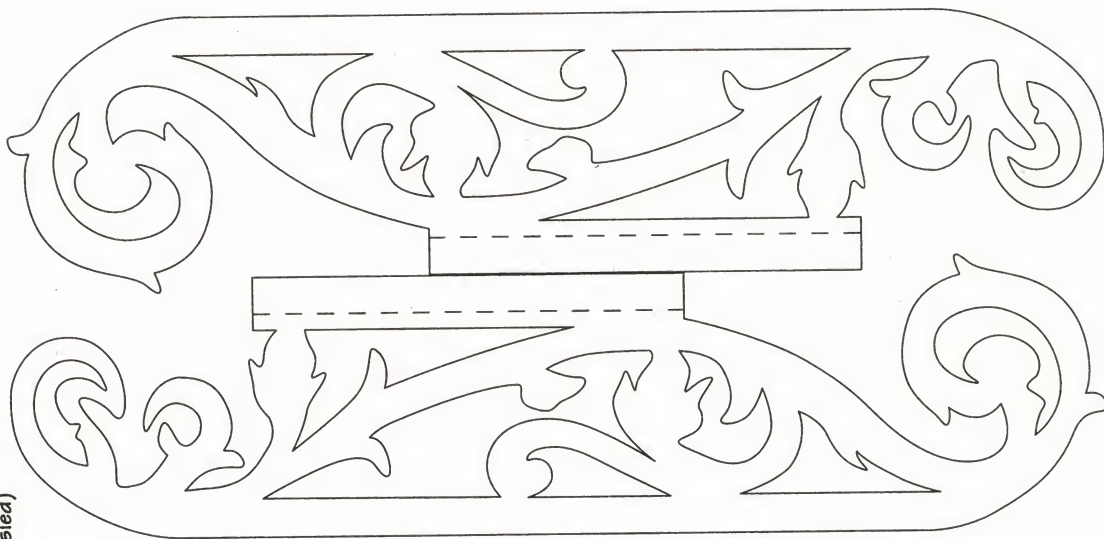
Wheat Sheaf
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Candleholder Centerpiece
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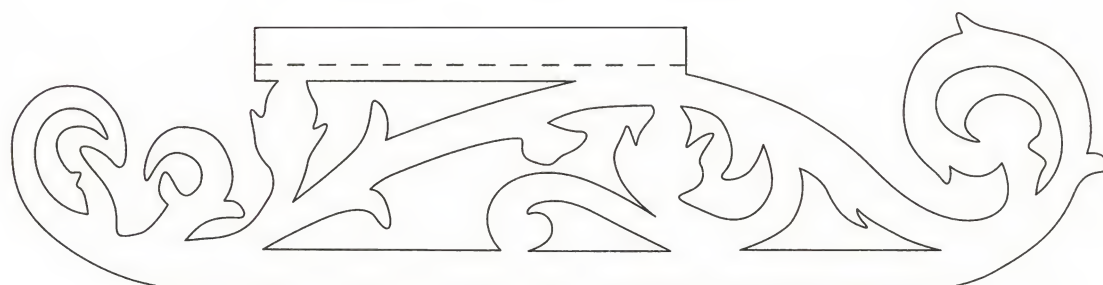
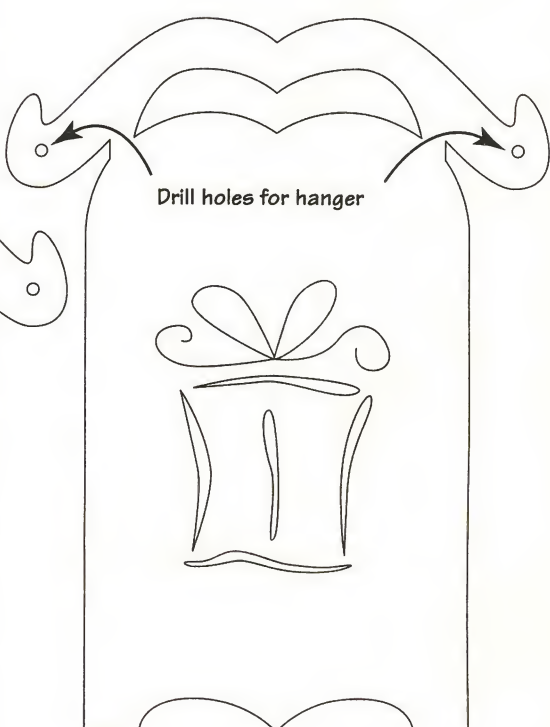
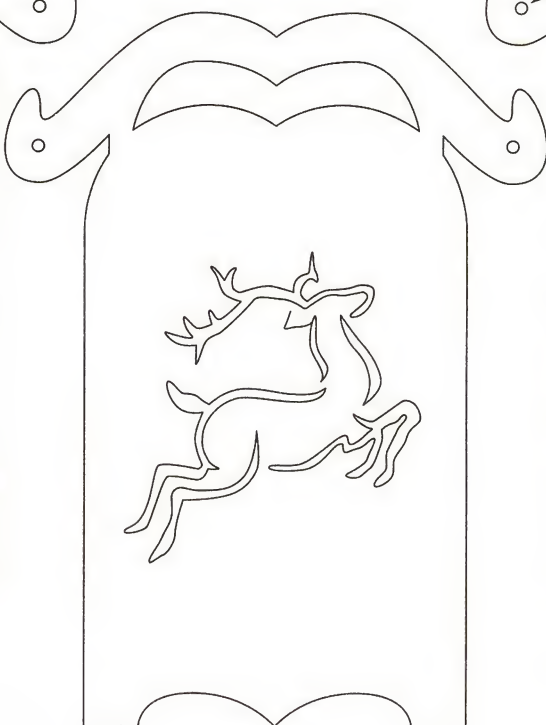
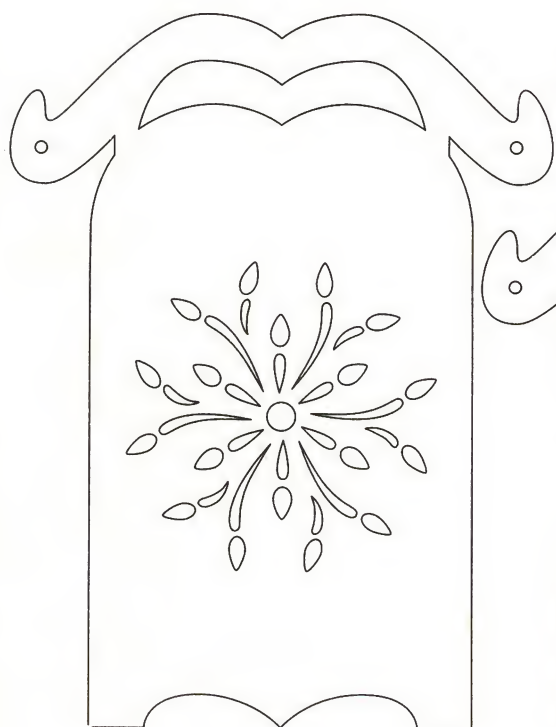
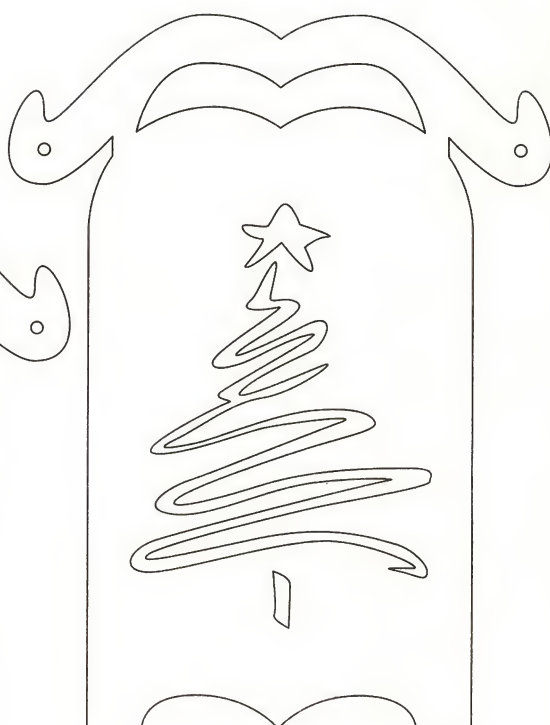
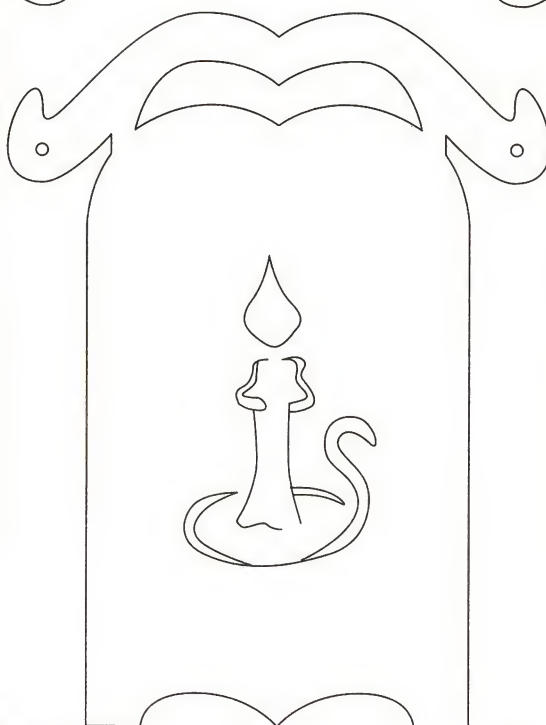
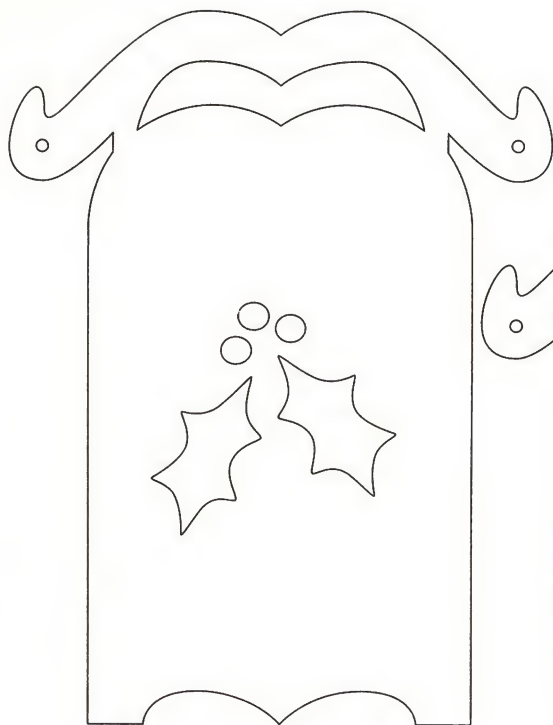
Sled Runners
(Cut 1 set per sled)



Cut along
dotted line
last to create
support piece

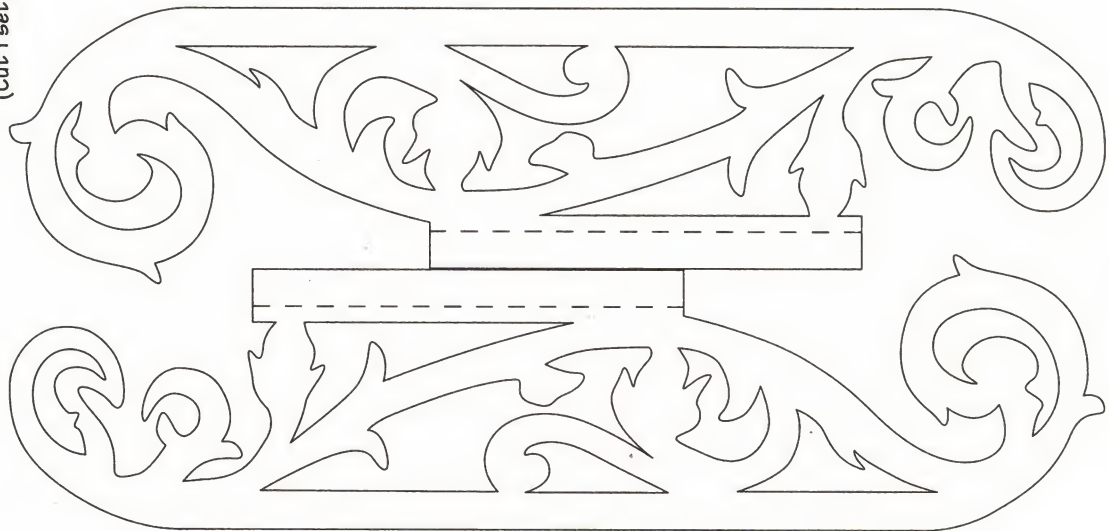
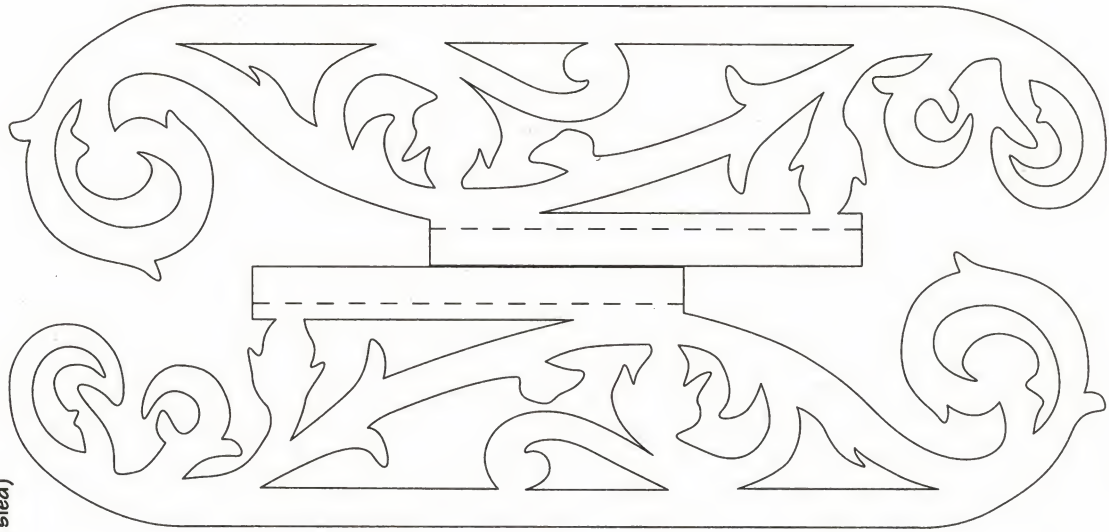
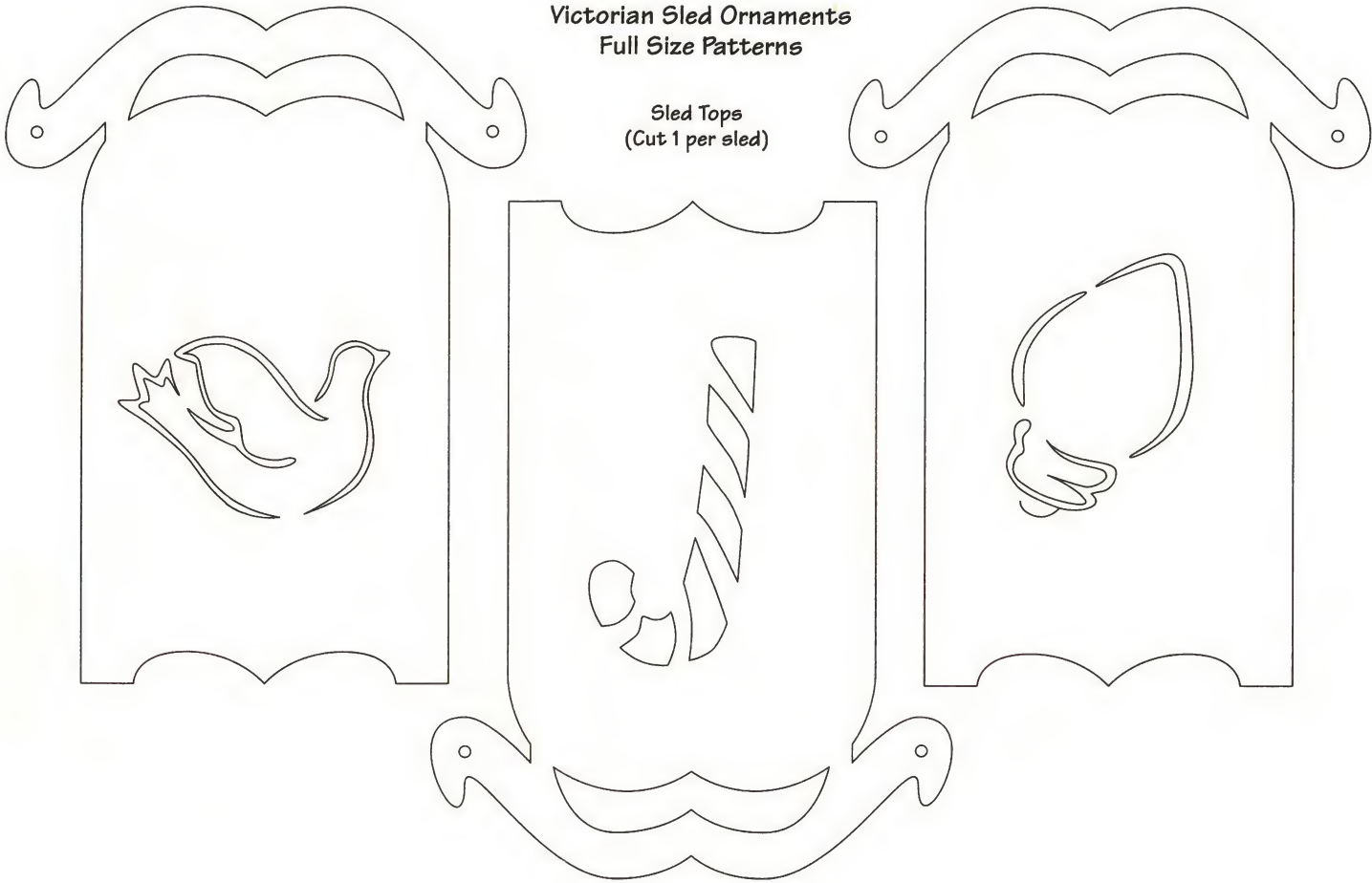
Victorian Sled Ornaments
Full Size Patterns

Sled Tops
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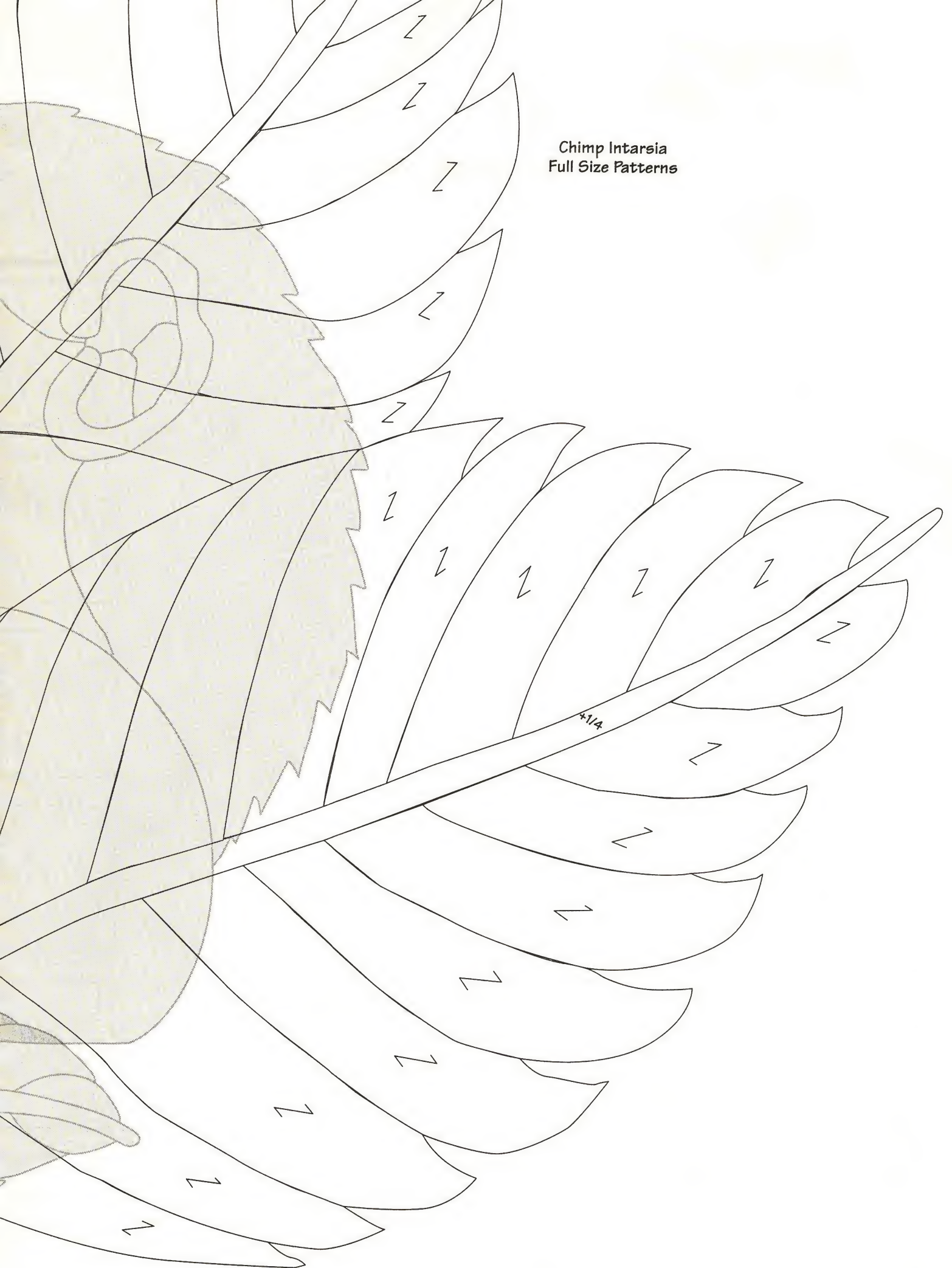
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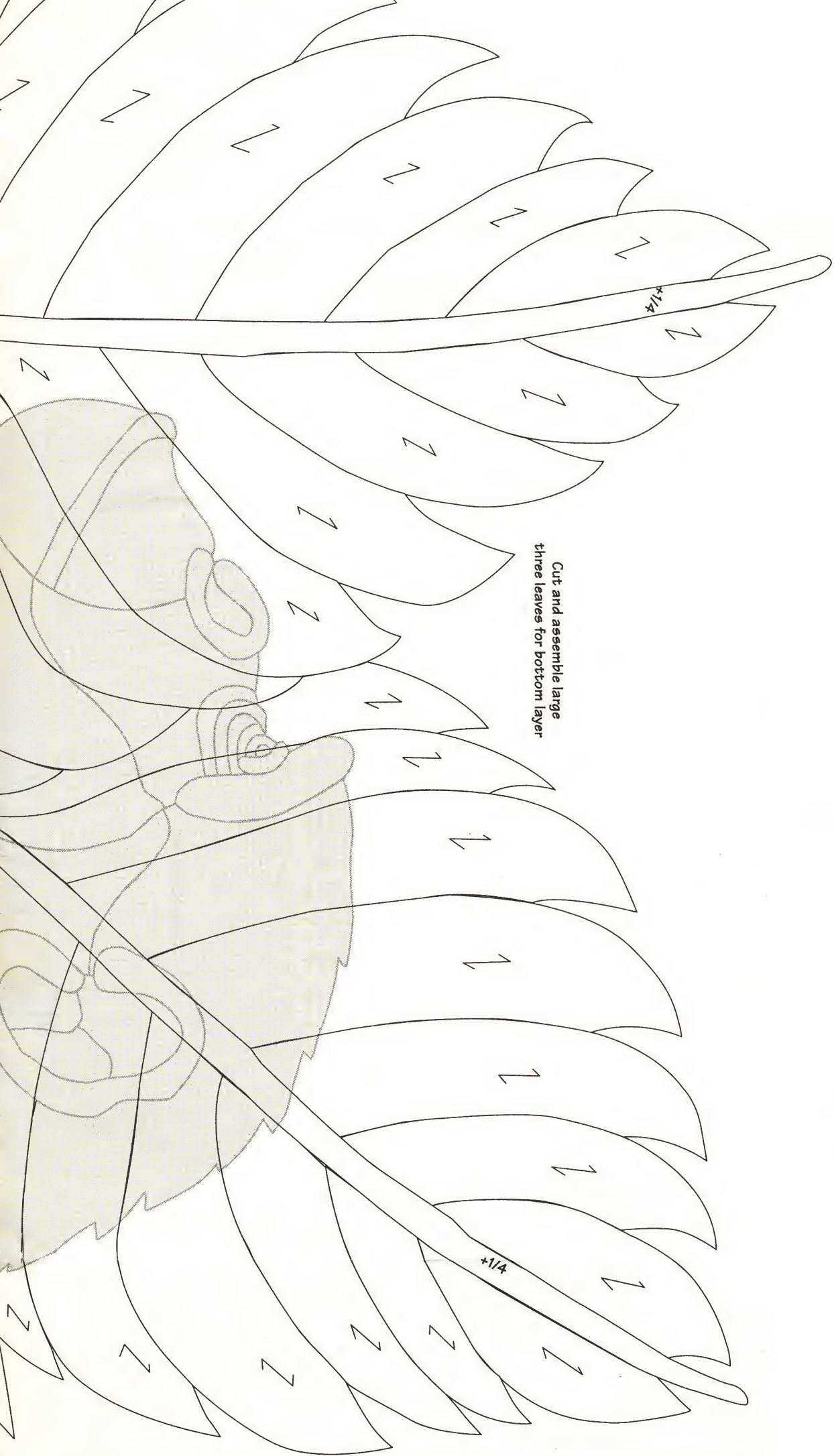


Glue set of three small
assembled leaves on top of chimp

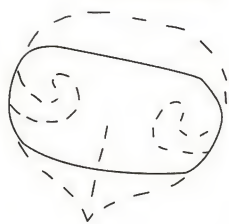


Chimp Intarsia
Full Size Patterns





Nose underlay



$+1/8"$

$+1/4"$

$1/2"$

$1/2"$

$5/8"$

$5/8"$

$5/8"$

$5/8"$

$5/8"$

$1/2"$

$1/2"$

$7/8"$

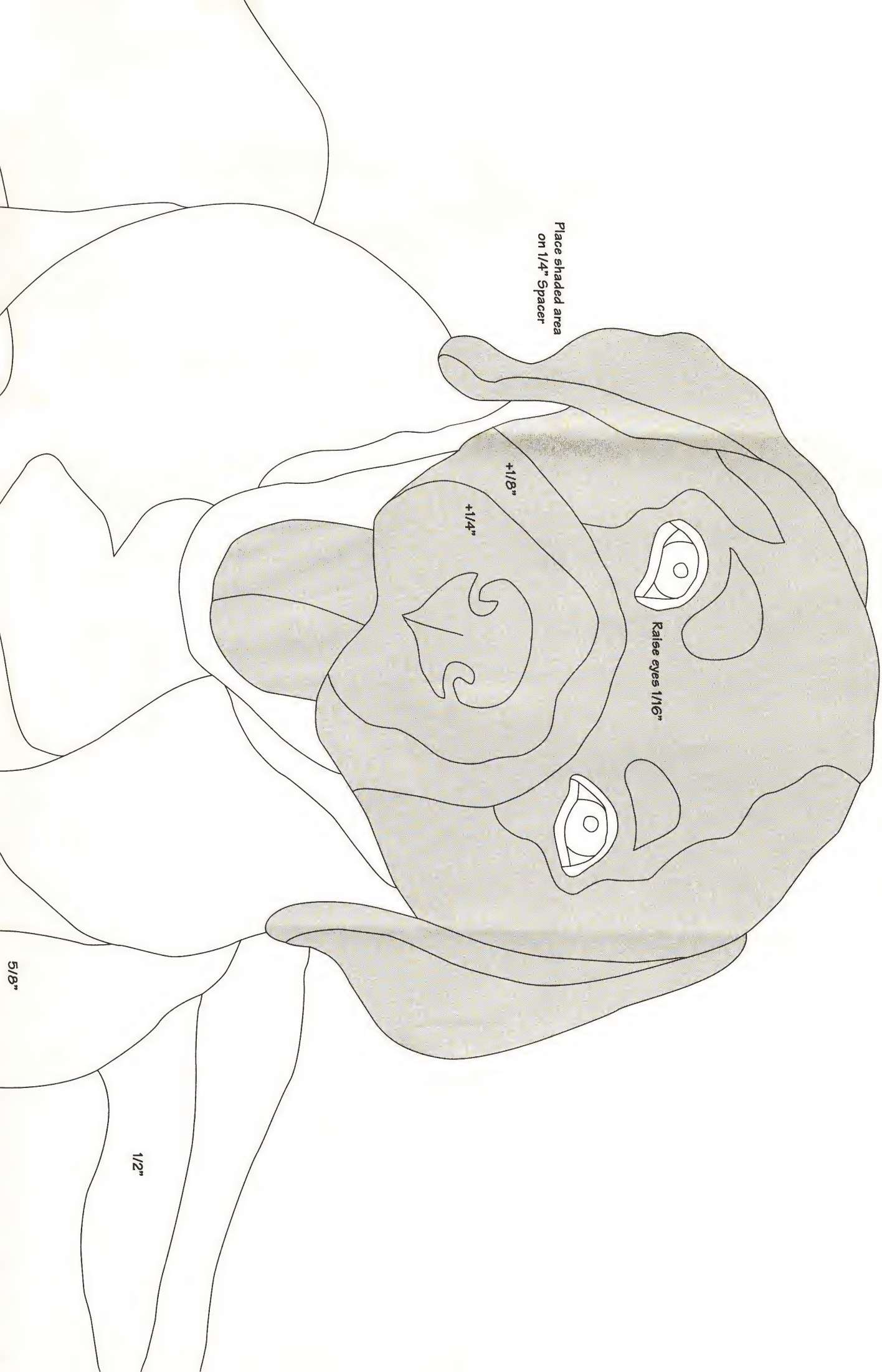
$5/8"$

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Yellow Lab Puppy
Full Size Pattern

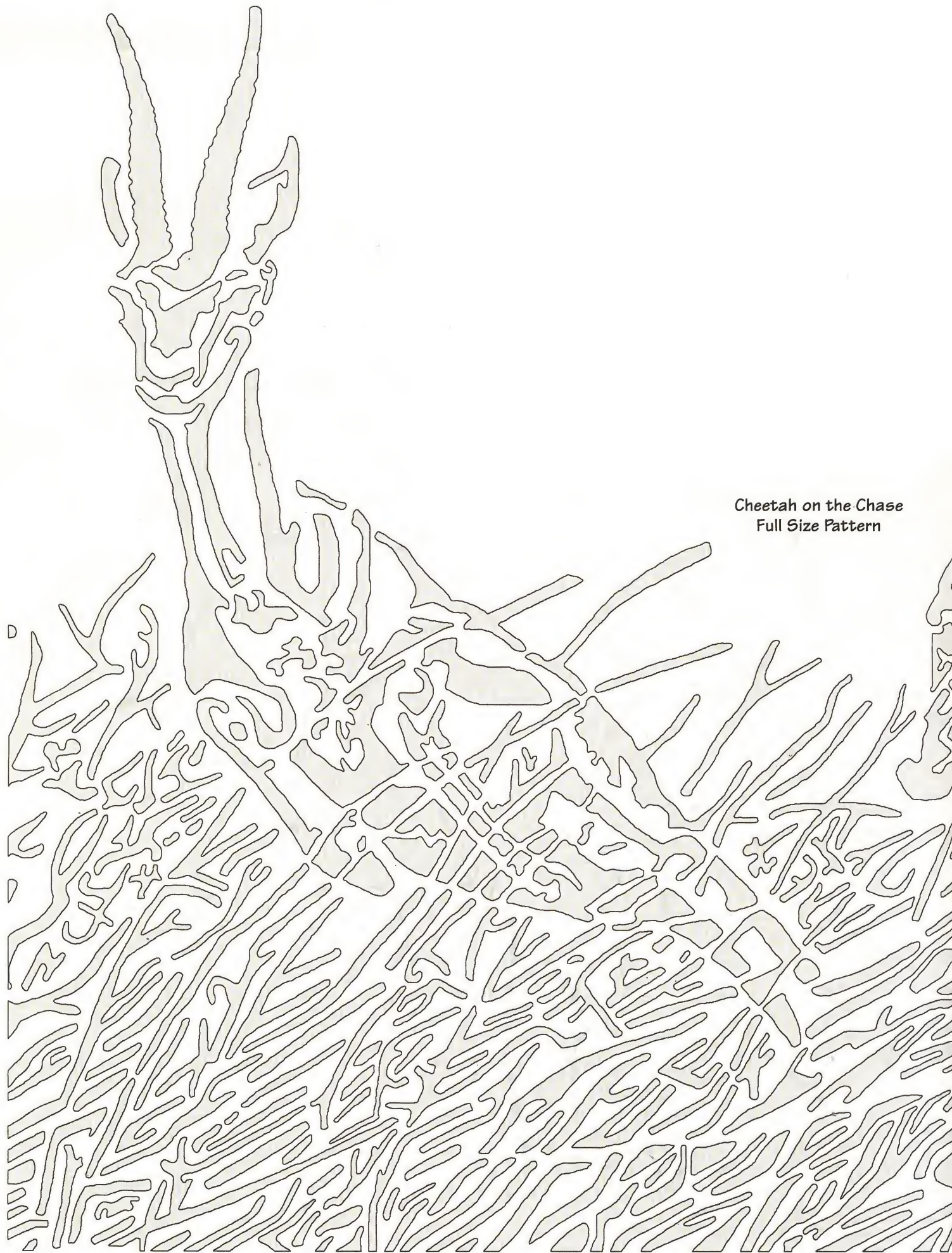
Place shaded area
on 1/4" Spacer



Double Trouble
Full Size Pattern



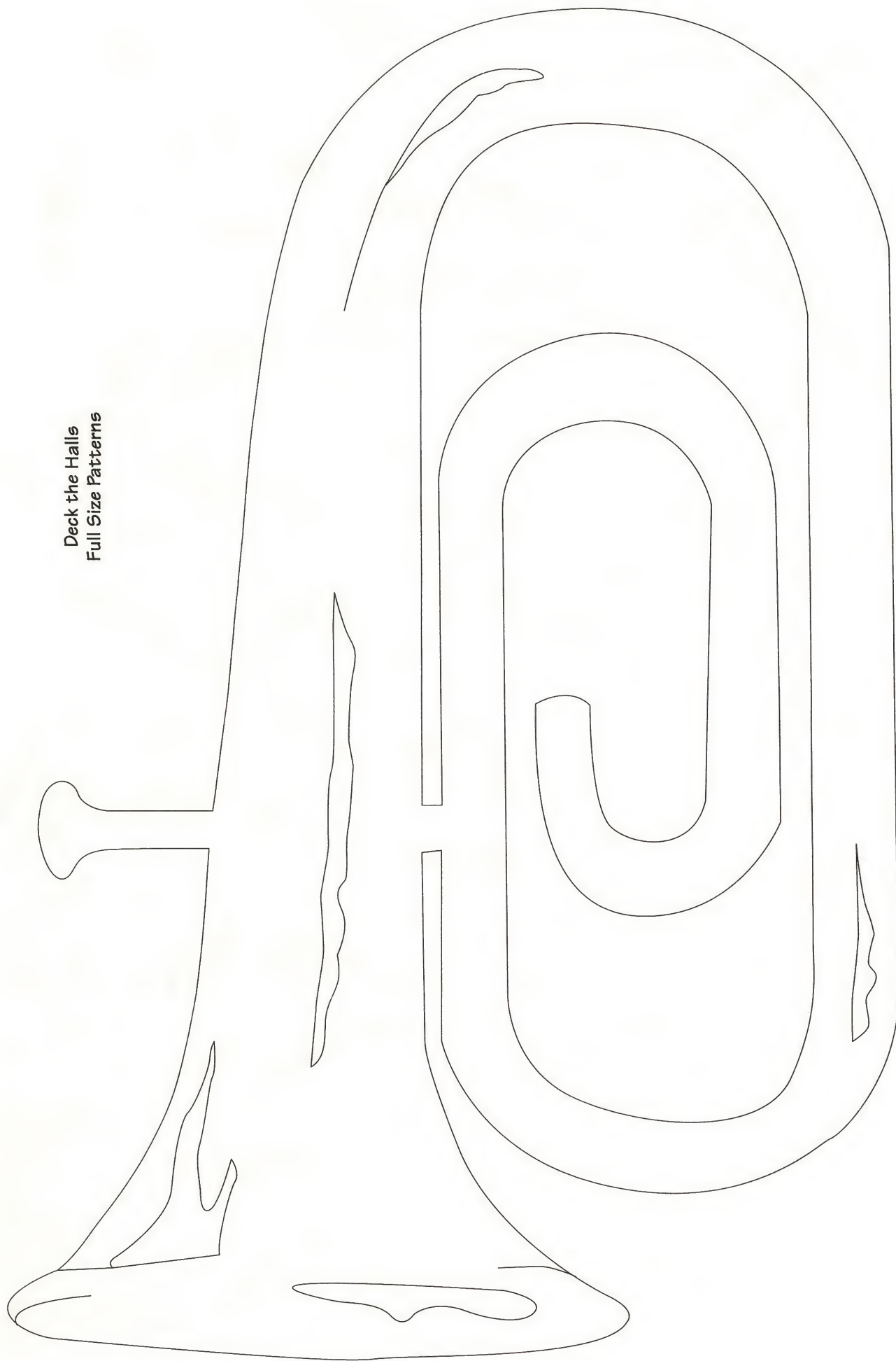


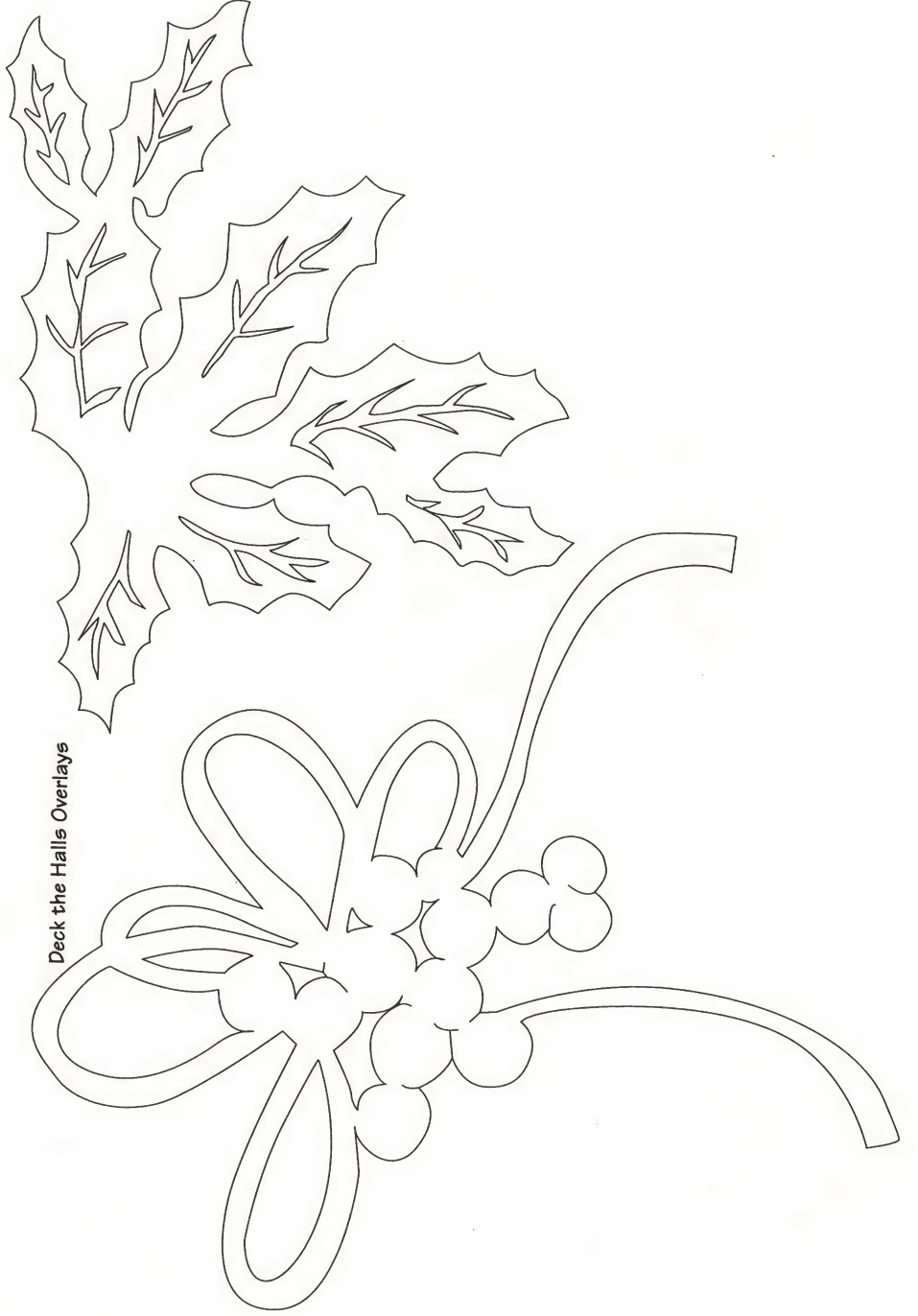
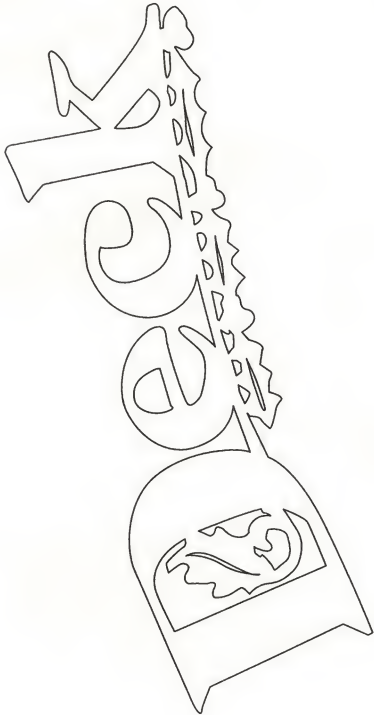
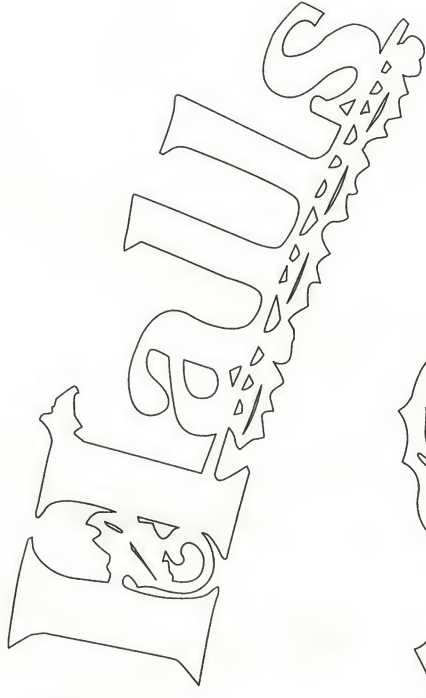
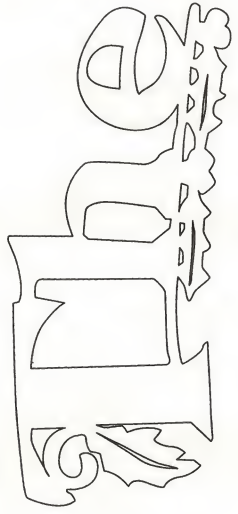


Cheetah on the Chase
Full Size Pattern

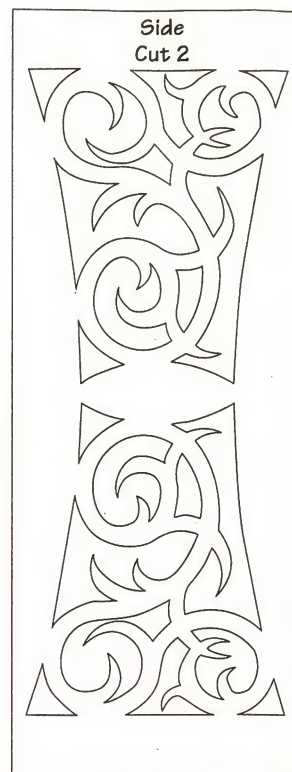
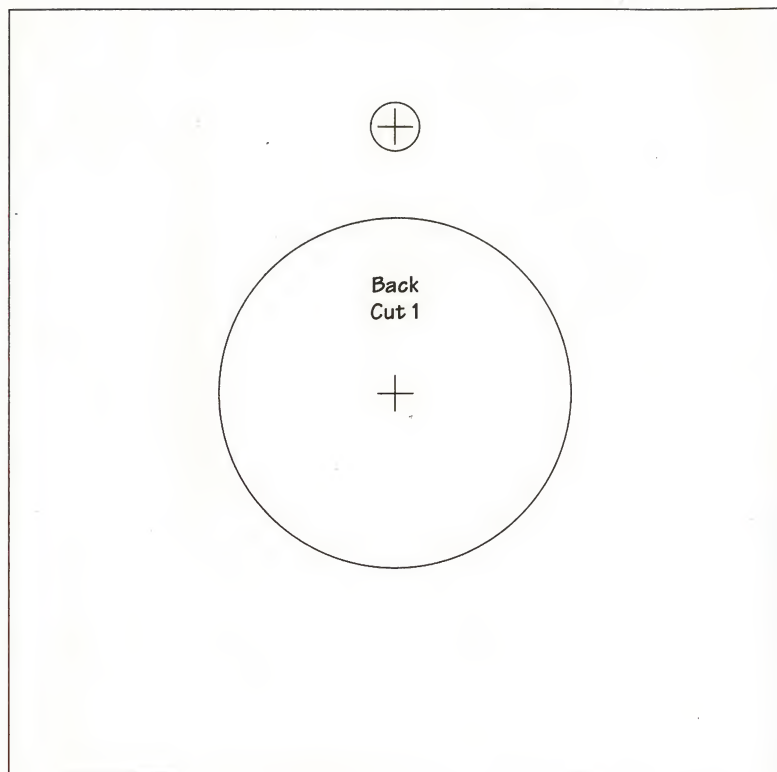


Deck the Halls
Full Size Patterns

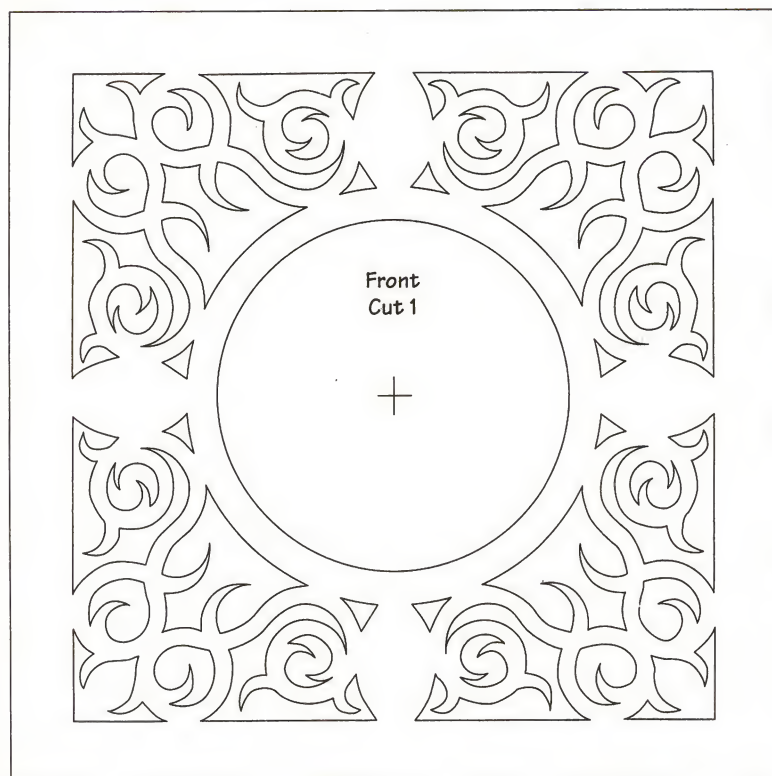




Deck the Halls Overlays



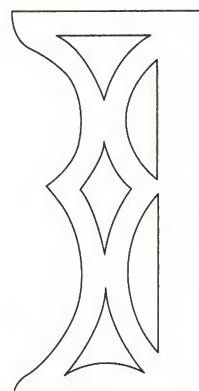
Pendulum Clock
Full Size Patterns



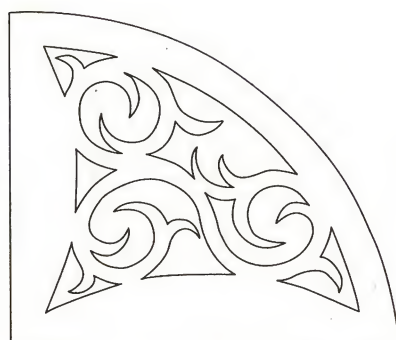
Upper Bracket
Cut 6



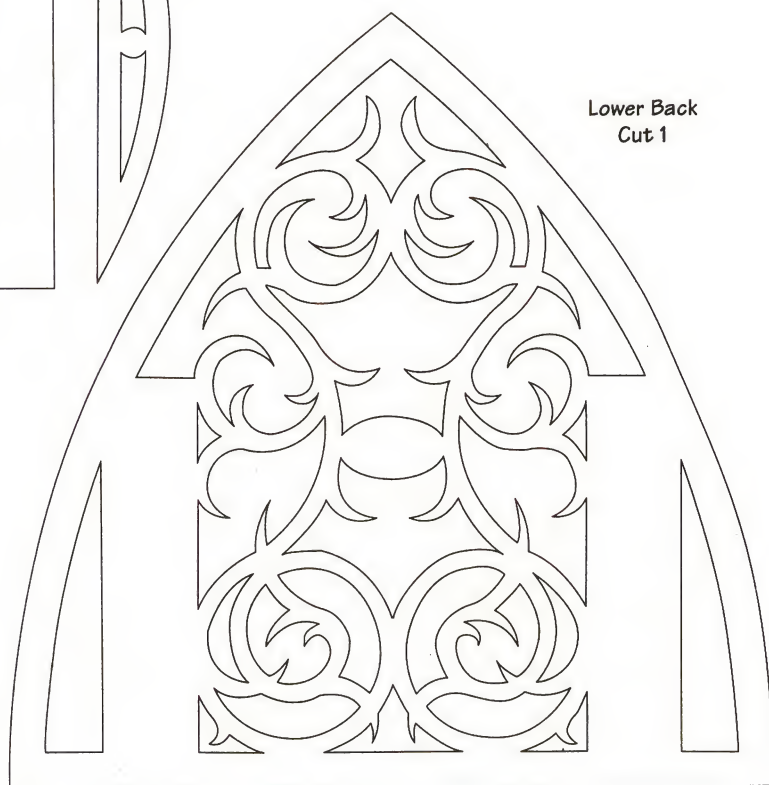
Crown Side
Cut 2



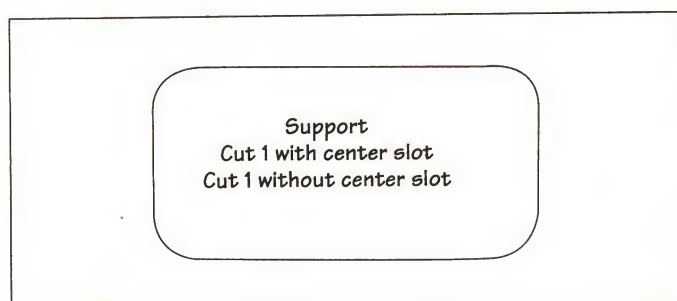
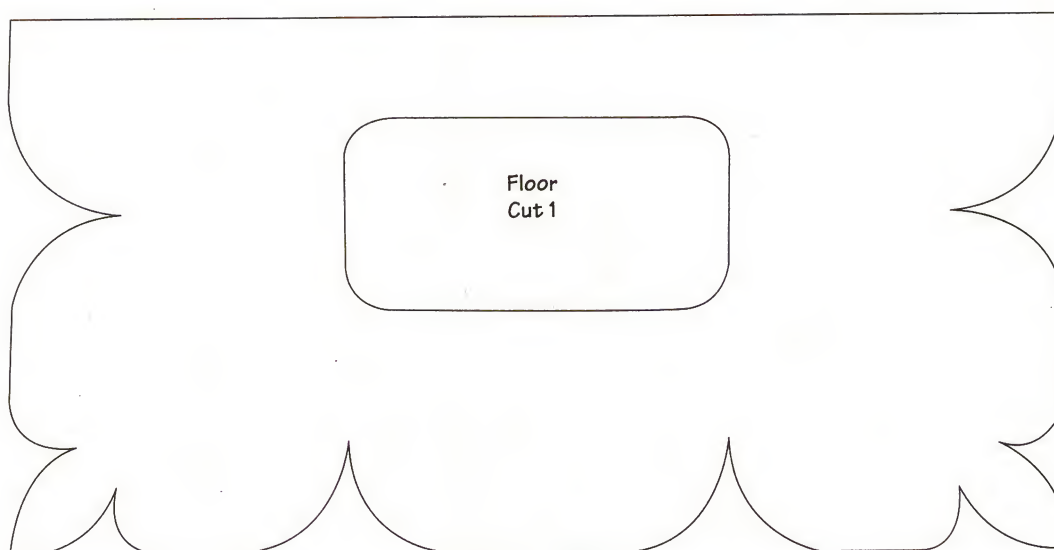
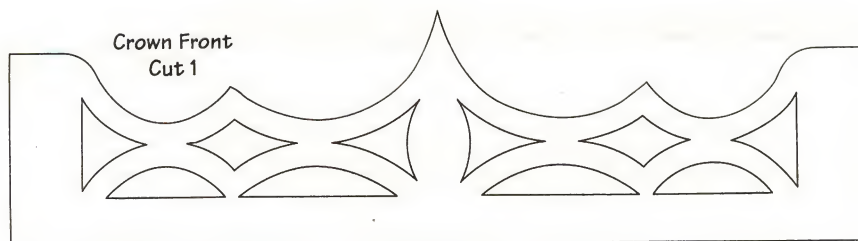
Lower Bracket
Cut 2



Lower Back
Cut 1



Pendulum Clock
Full Size Patterns



Potted Poinsettia
Full Size Pattern

Drill for Optional Hanging Point

Drill for Optional Hanging Point



Moonlight Wolf
Full Size Pattern



Wilderness Canyon
Full Size Pattern



The Clan
Full Size Pattern



Cut in clockwise
direction with
saw table set
3° to the right





----- Resonance Chamber

----- Wires

Door Harp Frame/Back Panel

Clappers

Shaker Pegs

Tuning Pins

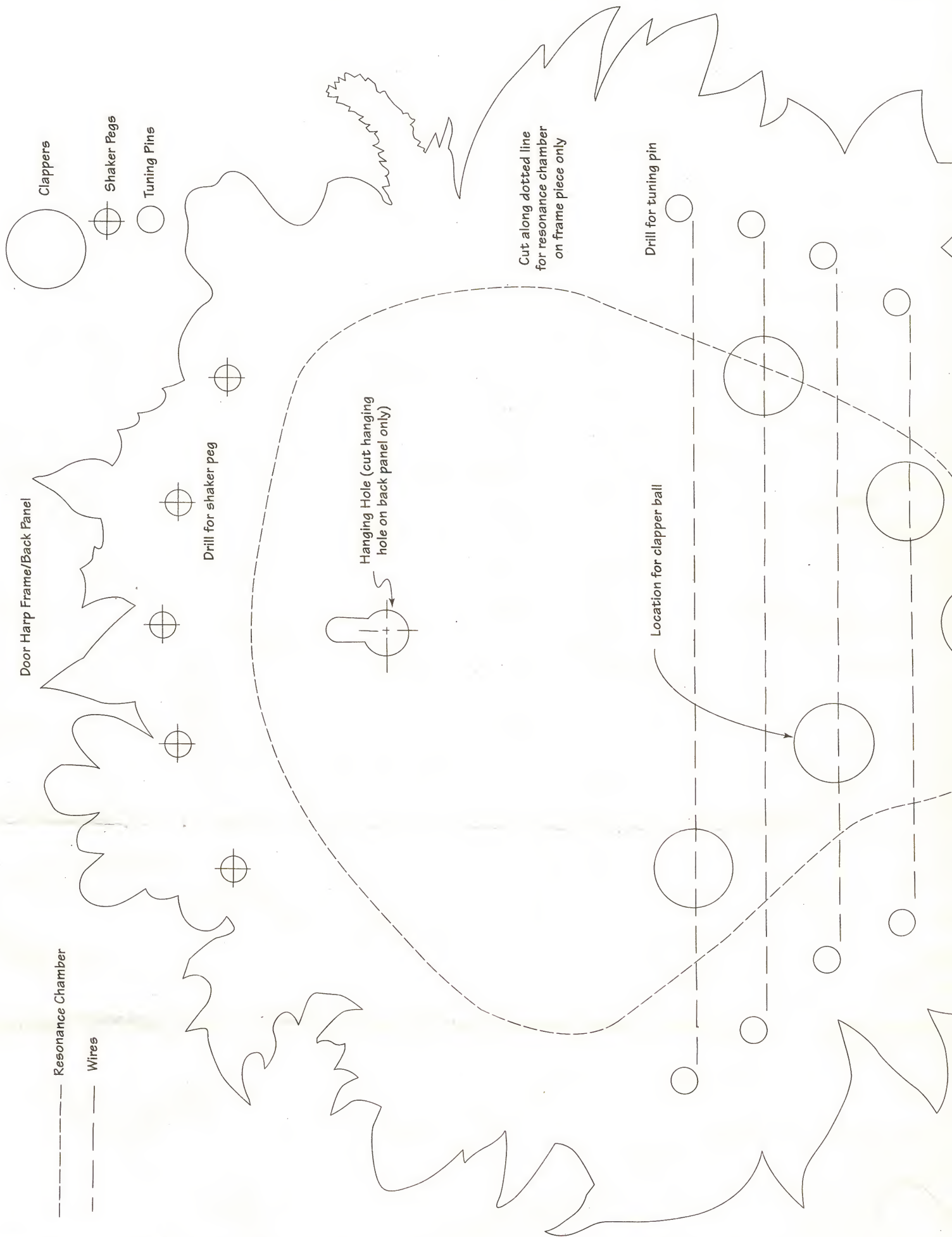
Drill for shaker peg

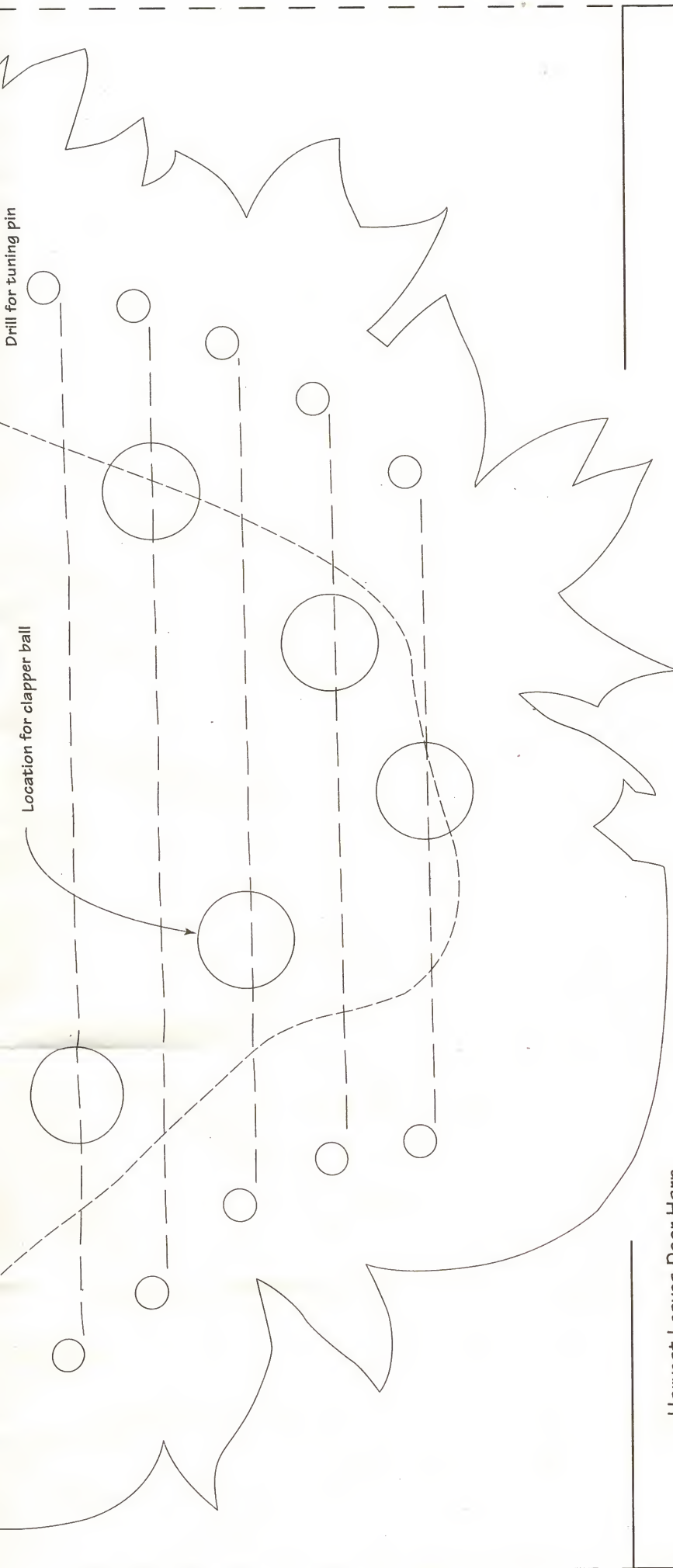
Hanging Hole (cut hanging
hole on back panel only)

Cut along dotted line
for resonance chamber
on frame piece only

Drill for tuning pin

Location for clapper ball





Drill for tuning pin

Location for clapper ball

Harvest Leaves Door Harp
Full Size Patterns



Door Harp Front Panel

